

**NEW SOURCE CONSTRUCTION PERMIT
and MINOR SOURCE OPERATING PERMIT
OFFICE OF AIR MANAGEMENT**

**Montpelier Electric Generating Station
8265 South 450 West
Poneto, Indiana 46781**

(herein known as the Permittee) is hereby authorized to construct and operate subject to the conditions contained herein, the emission units described in Section A (Source Summary) of this permit.

This permit is issued to the above mentioned company under the provisions of 326 IAC 2-1.1, 326 IAC 2-5.1, 326 IAC 2-6.1 and 40 CFR 52.780, with conditions listed on the attached pages.

Operation Permit No.: MSOP 179-12321-00026	
Issued by: Paul Dubenetzky, Branch Chief Office of Air Management	Issuance Date:

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SECTION A

SOURCE SUMMARY

This permit is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Management (OAM). The information describing the source contained in conditions A.1 through A.3 is descriptive information and does not constitute enforceable conditions. However, the Permittee should be aware that a physical change or a change in the method of operation that may render this descriptive information obsolete or inaccurate may trigger requirements for the Permittee to obtain additional permits or seek modification of this permit pursuant to 326 IAC 2, or change other applicable requirements presented in the permit application.

A.1 General Information [326 IAC 2-5.1-3(c)] [326 IAC 2-6.1-4(a)]

The Permittee owns and operates an electric generating station.

Authorized Individual: Kirk N. Guy
Source Address: 8265 South 450 West, Poneto, Indiana 46781
Mailing Address: 8150 Washington Village Drive, Centerville, Ohio 45458
Phone Number: (937) 331-3142
SIC Code: 4911
County Location: Wells
County Status: Attainment for all criteria pollutants
Source Status: Minor Source, under PSD or Emission Offset Rules;
Minor Source, Section 112 of the Clean Air Act

A.2 Emissions units and Pollution Control Equipment Summary

This stationary source is approved to construct and operate the following emissions units and pollution control devices:

- (a) Eight (8) Twin Pac combustion turbine generator units, consisting of sixteen (16) simple cycle turbines and eight (8) generators, which each generator is directly connected to two (2) combustion turbines. The generators are designated as units G1 through G8, and the two (2) combustion turbines, which are directly connected to each generator, are designated as CT1 and CT2. The sixteen (16) combustion turbines have an anticipated maximum heat input capacity of 270.9 MMBTU/hr (Lower Heating Value, LHV) per turbine unit, a maximum nominal output of 25 MW per turbine, with water-injection for NO_x emissions control, and exhaust to sixteen (16) stacks designated as G1CT1S1 through G8CT2S2.
- (b) Natural gas-fired space heating equipment, with a maximum heat input capacity of 0.1 MMBtu/hr and exhaust to the atmosphere.
- (c) One (1) diesel-fired emergency fire pump, with a maximum heat input capacity of 1.0 MMBtu/hr and exhausts to the atmosphere.
- (d) One (1) fuel oil storage tank, with a maximum storage capacity of 400,000 gallons, a maximum volume of 55,418 ft³ and vents to the atmosphere.

A.3 Part 70 Permit Applicability [326 IAC 2-7-2]

This stationary source will be required to have a Part 70 permit by 326 IAC 2-7-2 (Applicability) because:

- (a) It is a major source, as defined in 326 IAC 2-7-1(22).
- (b) This new source shall apply for a Part 70 (Title V) operating permit within twelve (12) months after this source becomes subject to Title V.

A.4 Acid Rain Permit Applicability [40 CFR Part 72.30]

This stationary source shall be required to have a Phase II, Acid Rain permit by 40 CFR Part 72.30 (Applicability) because:

- (a) The combustion turbines are new units under 40 CR Part 72.6.
- (b) The source cannot operate the combustion units until their Phase II, Acid Rain permit has been issued.

SECTION B GENERAL CONSTRUCTION CONDITIONS

THIS SECTION OF THE PERMIT IS BEING ISSUED UNDER THE PROVISIONS OF 326 IAC 2-1.1 AND 40 CFR 52.780, WITH CONDITIONS LISTED BELOW.

B.1 Permit No Defense [IC 13]

This permit to construct does not relieve the Permittee of the responsibility to comply with the provisions of the Indiana Environmental Management Law (IC 13-11 through 13-20; 13-22 through 13-25; and 13-30), the Air Pollution Control Law (IC 13-17) and the rules promulgated thereunder, as well as other applicable local, state, and federal requirements.

B.2 Definitions

Terms in this permit shall have the definition assigned to such terms in the referenced regulation. In the absence of definitions in the referenced regulation, any applicable definitions found in IC 13-11, 326 IAC 1-2, and 326 IAC 2-1.1-1 shall prevail.

B.3 Effective Date of the Permit [IC13-15-5-3]

Pursuant to IC 13-15-5-3, this permit becomes effective upon its issuance.

B.4 Revocation of Permits [326 IAC 2-1.1-9(5)]

Pursuant to 326 IAC 2-1.1-9(5)(Revocation of Permits), this permit to construct and operate may be revoked for any of the following causes:

- (a) Violation of any conditions of this permit.
- (b) Failure to disclose all the relevant facts, or misrepresentation in obtaining this permit.
- (c) Changes in regulatory requirements that mandate either a temporary or permanent reduction of discharge of contaminants. However, the amendment of appropriate sections of this permit shall not require revocation of this permit.
- (d) Noncompliance with orders issued pursuant to 326 IAC 1-5 (Episode Alert Levels) to reduce emissions during an air pollution episode.
- (e) For any cause which establishes in the judgment of IDEM, the fact that continuance of this permit is not consistent with purposes of this article. If construction is not commenced within eighteen (18) months after receipt of this approval or if construction is suspended for a continuous period of one (1) year or more.

B.5 Modification to Permit [326 IAC 2]

Notwithstanding the Section B condition entitled "Minor Source Operating Permit", all requirements and conditions of this construction permit shall remain in effect unless modified in a manner consistent with procedures established for modifications of construction permits pursuant to 326 IAC 2 (Permit Review Rules).

B.6 Minor Source Operating Permit [326 IAC 2-6.1]

This document shall also become a minor source operating permit pursuant to 326 IAC 2-6.1 when, prior to start of operation, the following requirements are met:

- (a) The attached Affidavit of Construction shall be submitted to the Office of Air Management (OAM), Permit Administration & Development Section.
 - (1) If the Affidavit of Construction verifies that the facilities covered in this Construction Permit were constructed as proposed in the application, then the facilities may begin operating on the date the Affidavit of Construction is postmarked or hand delivered to IDEM.

- (2) If the Affidavit of Construction does not verify that the facilities covered in this Construction Permit were constructed as proposed in the application, then the Permittee shall receive an Operation Permit Validation Letter from the Chief of the Permit Administration & Development Section prior to beginning operation of the facilities.
- (b) If construction is completed in phases; i.e., the entire construction is not done continuously, a separate affidavit must be submitted for each phase of construction. Any permit conditions associated with operation start up dates such as stack testing for New Source Performance Standards (NSPS) shall be applicable to each individual phase.
- (c) Upon receipt of the Operation Permit Validation Letter from the Chief of the Permit Administration & Development Section, the Permittee shall attach it to this document.
- (d) The operation permit will be subject to annual operating permit fees pursuant to 326 IAC 2-7-19 (Fees).
- (e) Pursuant to 326 IAC 2-7-4(a)(1)(A)(ii) and 326 IAC 2-5.1-4, the Permittee shall apply for a Title V operating permit within twelve (12) months of the date on which the source first meets an applicability criterion of 326 IAC 2-7-2.

B.7 NSPS Reporting Requirement

Pursuant to the New Source Performance Standards (NSPS), Part 60.7, Any owner or operator shall furnish the Administrator and IDEM written notification or, if acceptable to both the Administrator and the owner or operator of a source, electronic notification, as follows:

- (a) Commencement of construction date (no later than 30 days after such date);
- (b) Actual start-up date (within 15 days after such date); and
- (c) Date of performance testing (at least 30 days prior to such date), when required by a condition elsewhere in this permit.

Reports are to be sent to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Management
100 North Senate Avenue, P. O. Box 6015
Indianapolis, IN 46206-6015

The application and enforcement of these standards have been delegated to the IDEM-OAM. The requirements of 40 CFR Part 60 are also federally enforceable.

SECTION C SOURCE OPERATION CONDITIONS

Entire Source

C.1 PSD Minor Source Status [326 IAC 2-2] [40 CFR 52.21]

- (a) The potential to emit of nitrogen oxides (NO_x), carbon monoxide (CO), Particulate Matter (PM), Particulate Matter Less than 10 Microns (PM₁₀), Sulfur Dioxide (SO₂) and Volatile Organic Compounds (VOC) for the facilities listed in this construction permit, are greater than 250 tons per year. The potential to emit, of the above listed pollutants, is limited to less than 250 tons per year, therefore the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration) and 40 CFR 52.21 do not apply.
- (b) Any change or modification which may increase potential to emit to 250 tons per year from this source, shall cause this source to be considered a major source under PSD, 326 IAC 2-2 and 40 CFR 52.21, and shall require approval from IDEM, OAM prior to making the change.

C.2 Preventive Maintenance Plan [326 IAC 1-6-3]

- (a) If required by specific condition(s) in Section D of this permit, the Permittee shall prepare and maintain Preventive Maintenance Plans (PMP) after commencement of operation, including the following information on each emissions unit:
 - (1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;
 - (2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions;
 - (3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.
- (b) The Permittee shall implement the Preventive Maintenance Plans as necessary to ensure that failure to implement the Preventive Maintenance Plan does not cause or contribute to a violation of any limitation on emissions or potential to emit.
- (c) PMP's shall be submitted to IDEM, OAM, upon request and shall be subject to review and approval by IDEM, OAM. IDEM, OAM may require the Permittee to revise its Preventive Maintenance Plan whenever lack of proper maintenance causes or contributes to any violation.

C.3 Permit Revision [326 IAC 2-5.1-3(e)(3)] [326 IAC 2-6.1-6]

- (a) The Permittee must comply with the requirements of 326 IAC 2-6.1-6 whenever the Permittee seeks to amend or modify this permit.
- (b) Any application requesting an amendment or modification of this permit shall be submitted to:

Indiana Department of Environmental Management
Permits Branch, Office of Air Management
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

Any such application should be certified by the "authorized individual" as defined by 326 IAC 2-1.1-1.

- (c) The Permittee shall notify the OAM within thirty (30) calendar days of implementing a notice-only change. [326 IAC 2-6.1-6(d)]

C.4 Source Modification [326 IAC 2-7-10.5]

- (a) The Permittee must comply with the requirements of 326 IAC 2-7-10.5 whenever the Permittee seeks to construct new emissions units, modify existing emissions units, or otherwise modify the source.

- (b) Any application requesting an amendment or modification of this permit shall be submitted to:

Indiana Department of Environmental Management
Permits Branch, Office of Air Management
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

Any such application should be certified by the "responsible official" as defined by 326 IAC 2-7-1(34) only if a certification is required by the terms of the applicable rule.

C.5 Inspection and Entry [326 IAC 2-5.1-3(e)(4)(B)] [326 IAC 2-6.1-5(a)(4)]

Upon presentation of proper identification cards, credentials, and other documents as may be required by law, and subject to the Permittee's right under all applicable laws and regulations to assert that the information collected by the agency is confidential and entitled to be treated as such, the Permittee shall allow IDEM, OAM, U.S. EPA, or an authorized representative to perform the following:

- (a) Enter upon the Permittee's premises where a permitted source is located, or emissions related activity is conducted, or where records must be kept under the conditions of this permit;
- (b) Have access to and copy, at reasonable times, any records that must be kept under this title or the conditions of this permit or any operating permit revisions;
- (c) Inspect, at reasonable times, any processes, emissions units (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit or any operating permit revisions;
- (d) Sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with this permit or applicable requirements; and
- (e) Utilize any photographic, recording, testing, monitoring, or other equipment for the purpose of assuring compliance with this permit or applicable requirements.

C.6 Transfer of Ownership or Operation [326 IAC 2-6.1-6(d)(3)]

Pursuant to [326 IAC 2-6.1-6(d)(3)] :

- (a) In the event that ownership of this source is changed, the Permittee shall notify IDEM, OAM, Permits Branch, within thirty (30) days of the change.
- (b) The written notification shall be sufficient to transfer the permit to the new owner by an notice-only change pursuant to 326 IAC 2-6.1-6(d)(3).
- (c) IDEM, OAM shall issue a revised permit.

The notification which shall be submitted by the Permittee does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1.

C.7 Opacity [326 IAC 5-1]

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:

- (a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
- (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

C.8 Fugitive Dust Emissions [326 IAC 6-4]

The Permittee shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4 (Fugitive Dust Emissions). 326 IAC 6-4-2(4) is not federally enforceable.

C.9 Fugitive Particulate Matter Emission Limitations [326 IAC 6-5]

Pursuant to 326 IAC 6-5 (Fugitive Particulate Matter Emissions Limitations), fugitive particulate matter emissions shall be controlled according to the plan submitted on February 16, 2000.

- (a) This plan consists of wet suppression of dust from roads on an as needed basis.

C.10 Stack Height [326 IAC 1-7]

The Permittee shall comply with the applicable provisions of 326 IAC 1-7 (Stack Height Provisions), for all exhaust stacks through which a potential (before controls) of twenty-five (25) tons per year or more of particulate matter or sulfur dioxide is emitted by using good engineering practices (GEP) pursuant to 326 IAC 1-7-3.

Testing Requirements

C.11 Performance Testing [326 IAC 3-6]

- (a) Compliance testing on new emissions units shall be conducted within 60 days after achieving maximum production rate, but no later than 180 days after initial start-up, if specified in Section D of this approval. All testing shall be performed according to the provisions of 326 IAC 3-6 (Source Sampling Procedures), except as provided elsewhere in this permit, utilizing any applicable procedures and analysis methods specified in 40 CFR 51, 40 CFR 60, 40 CFR 61, 40 CFR 63, 40 CFR 75, or other procedures approved by IDEM, OAM.

A test protocol, except as provided elsewhere in this permit, shall be submitted to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Management
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

no later than thirty-five (35) days prior to the intended test date. The Permittee shall submit a notice of the actual test date to the above address so that it is received at least two weeks prior to the test date.

- (b) All test reports must be received by IDEM, OAM within forty-five (45) days after the completion of the testing. An extension may be granted by the IDEM, OAM, if the source submits to IDEM, OAM, a reasonable written explanation within five (5) days prior to the

end of the initial forty-five (45) day period.

The documentation submitted by the Permittee does not require certification by the “authorized individual” as defined by 326 IAC 2-1.1-1.

Compliance Monitoring Requirements

C.12 Compliance Monitoring [326 IAC 2-1.1-11]

Compliance with applicable requirements shall be documented as required by this permit. The Permittee shall be responsible for installing any necessary equipment and initiating any required monitoring related to that equipment. All monitoring and record keeping requirements not already legally required shall be implemented when operation begins.

C.13 Maintenance of Monitoring Equipment [IC 13-14-1-13]

- (a) In the event that a breakdown of the monitoring equipment occurs, a record shall be made of the times and reasons of the breakdown and efforts made to correct the problem. To the extent practicable, supplemental or intermittent monitoring of the parameter should be implemented at intervals no less frequent than required in Section D of this permit until such time as the monitoring equipment is back in operation. In the case of continuous monitoring, supplemental or intermittent monitoring of the parameter should be implemented at intervals no less than one (1) hour until such time as the continuous monitor is back in operation.
- (b) The Permittee shall install, calibrate, quality assure, maintain, and operate all necessary monitors and related equipment. In addition, prompt corrective action shall be initiated whenever indicated.

C.14 Monitoring Methods [326 IAC 3]

Any monitoring or testing required by Section D of this permit shall be performed according to the provisions of 326 IAC 3, 40 CFR 60, Appendix A, or other approved methods as specified in this permit.

C.15 Malfunction Emission Reduction Program [326 IAC 1-6]

- (a) The Permittee is required to submit a malfunction emission rate reduction program within one-hundred eighty (180) days after the commencement of operation. The program shall include, but not limited to, the normal operating emission rate and the program proposed to reduce emissions in the event of a malfunction to an emission rate that will not contribute to the cause of the violation of the ambient air quality standards established in 326 IAC 1-3. The program shall be based on the best estimates of type and number of startups, shutdowns, and malfunctions experienced during normal operation of the facility or emission control device and the scope and duration of such conditions. This program may be subject to review and approval by the Commissioner.
- (b) For each compliance monitoring condition of this permit, appropriate response steps shall be taken when indicated by the provisions of that compliance monitoring condition. Failure to perform the actions detailed in the compliance monitoring conditions or failure to take the response steps within the time prescribed in the Malfunction Emission Reduction Program, shall constitute a violation of the permit unless taking the response steps set forth in the Malfunction Emission Reduction Program would be unreasonable.

- (c) After investigating the reason for the excursion, the Permittee is excused from taking further response steps for any of the following reasons:
 - (1) The monitoring equipment malfunctioned, giving a false reading. This shall be an excuse from taking further response steps providing that prompt action was taken to correct the monitoring equipment.
 - (2) The Permittee has determined that the compliance monitoring parameters established in the permit conditions are technically inappropriate, has previously submitted a request for an administrative amendment to the permit, and such request has not been denied or;
 - (3) An automatic measurement was taken when the process was not operating; or
 - (4) The process has already returned to operating within "normal" parameters and no response steps are required.
- (d) Records shall be kept of all instances in which the compliance related information was not met and of all response steps taken.

C.16 Actions Related to Noncompliance Demonstrated by a Stack Test

- (a) When the results of a stack test performed in conformance with Section C - Performance Testing, of this permit exceed the level specified in any condition of this permit, the Permittee shall take appropriate corrective actions. The Permittee shall submit a description of these corrective actions to IDEM, OAM, within thirty (30) days of receipt of the test results. The Permittee shall take appropriate action to minimize emissions from the affected emissions unit while the corrective actions are being implemented. IDEM, OAM shall notify the Permittee within thirty (30) days, if the corrective actions taken are deficient. The Permittee shall submit a description of additional corrective actions taken to IDEM, OAM within thirty (30) days of receipt of the notice of deficiency. IDEM, OAM reserves the authority to use enforcement activities to resolve noncompliant stack tests.
- (b) A retest to demonstrate compliance shall be performed within one hundred twenty (120) days of receipt of the original test results. Should the Permittee demonstrate to IDEM, OAM that retesting in one-hundred and twenty (120) days is not practicable, IDEM, OAM may extend the retesting deadline. Failure of the second test to demonstrate compliance with the appropriate permit conditions may be grounds for immediate revocation of the permit to operate the affected emissions unit.

The documents submitted pursuant to this condition do not require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1.

Record Keeping and Reporting Requirements

C.17 Malfunctions Report [326 IAC 1-6-2]

Pursuant to 326 IAC 1-6-2 (Records; Notice of Malfunction):

- (a) A record of all malfunctions, including startups or shutdowns of any facility or emission control equipment, which result in violations of applicable air pollution control regulations or applicable emission limitations shall be kept and retained for a period of three (3)

years and shall be made available to the Indiana Department of Environmental Management (IDEM), Office of Air Management (OAM) or appointed representative upon request.

- (b) When a malfunction of any facility or emission control equipment occurs which lasts more than one (1) hour, said condition shall be reported to OAM, using the Malfunction Report Forms (2 pages). Notification shall be made by telephone or facsimile, as soon as practicable, but in no event later than four (4) daytime business hours after the beginning of said occurrence.
- (c) Failure to report a malfunction of any emission control equipment shall constitute a violation of 326 IAC 1-6, and any other applicable rules. Information of the scope and expected duration of the malfunction shall be provided, including the items specified in 326 IAC 1-6-2(a)(1) through (6).
- (d) Malfunction is defined as any sudden, unavoidable failure of any air pollution control equipment, process, or combustion or process equipment to operate in a normal and usual manner. [326 IAC 1-2-39]

C.18 Annual Emission Statement [326 IAC 2-6]

- (a) The Permittee shall submit an annual emission statement certified pursuant to the requirements of 326 IAC 2-6, that must be received by July 1 of each year and must comply with the minimum requirements specified in 326 IAC 2-6-4. The annual emission statement shall meet the following requirements:
 - (1) Indicate actual emissions of criteria pollutants from the source, in compliance with 326 IAC 2-6 (Emission Reporting);
 - (2) Indicate actual emissions of other regulated pollutants from the source, for purposes of Part 70 fee assessment.
- (b) The annual emission statement covers the twelve (12) consecutive month time period starting January 1 and ending December 31. The annual emission statement must be submitted to:

Indiana Department of Environmental Management
Technical Support and Modeling Section, Office of Air Management
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015
- (c) The annual emission statement required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAM, on or before the date it is due.

The submittal by the Permittee does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1.

C.19 Monitoring Data Availability [326 IAC 2-6.1-2] [IC 13-14-1-13]

- (a) With the exception of performance tests conducted in accordance with Section C-Performance Testing, all observations, sampling, maintenance procedures, and record keeping, required as a condition of this permit shall be performed at all times the equipment is operating at normal representative conditions.

- (b) As an alternative to the observations, sampling, maintenance procedures, and record keeping of subsection (a) above, when the equipment listed in Section D of this permit is not operating, the Permittee shall either record the fact that the equipment is shut down or perform the observations, sampling, maintenance procedures, and record keeping that would otherwise be required by this permit.
- (c) If the equipment is operating but abnormal conditions prevail, additional observations and sampling should be taken with a record made of the nature of the abnormality.
- (d) If for reasons beyond its control, the operator fails to make required observations, sampling, maintenance procedures, or record keeping, reasons for this must be recorded.
- (e) At its discretion, IDEM may excuse such failure providing adequate justification is documented and such failures do not exceed five percent (5%) of the operating time in any quarter.
- (f) Temporary, unscheduled unavailability of staff qualified to perform the required observations, sampling, maintenance procedures, or record keeping shall be considered a valid reason for failure to perform the requirements stated in (a) above.

C.20 General Record Keeping Requirements [326 IAC 2-6.1-2]

- (a) Records of all required monitoring data and support information shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. These records shall be kept at the source location, or at an accessible location such that the records could be made available within one (1) hour upon request, and provided that OAM is notified in writing prior, for a minimum of three (3) years and available upon the request of an IDEM, OAM representative. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a written request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.
- (b) Records of required monitoring information shall include, where applicable:
 - (1) The date, place, and time of sampling or measurements;
 - (2) The dates analyses were performed;
 - (3) The company or entity performing the analyses;
 - (4) The analytic techniques or methods used;
 - (5) The results of such analyses; and
 - (6) The operating conditions existing at the time of sampling or measurement.
- (c) Support information shall include, where applicable:
 - (1) Copies of all reports required by this permit;
 - (2) All original strip chart recordings for continuous monitoring instrumentation;
 - (3) All calibration and maintenance records;
 - (4) Records of preventive maintenance shall be sufficient to demonstrate that failure to implement the Preventive Maintenance Plan did not cause or

contribute to a violation of any limitation on emissions or potential to emit. To be relied upon subsequent to any such violation, these records may include, but are not limited to: work orders, parts inventories, and operator's standard operating procedures. Records of response steps taken shall indicate whether the response steps were performed in accordance with the Malfunction Emission Reduction Program required by Section C - Malfunction Emission Reduction Program, of this permit, and whether a deviation from a permit condition was reported. All records shall briefly describe what maintenance and response steps were taken and indicate who performed the tasks.

- (d) All record keeping requirements not already legally required shall be implemented when operation begins.

C.21 General Reporting Requirements [326 IAC 2-1.1-11] [326 IAC 2-6.1-2] [IC 13-14-1-13]

- (a) To affirm that the source has met all the compliance monitoring requirements stated in this permit the source shall submit a Quarterly Compliance Monitoring Report. Any deviation from the requirements and the date(s) of each deviation must be reported. The Compliance Monitoring Report shall include the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (b) The report required in (a) of this condition and reports required by conditions in Section D of this permit shall be submitted to:
- Indiana Department of Environmental Management
Compliance Data Section, Office of Air Management
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015
- (c) Unless otherwise specified in this permit, any notice, report, or other submission required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAM, on or before the date it is due.
- (d) Unless otherwise specified in this permit, any quarterly report shall be submitted within thirty (30) days of the end of the reporting period. The reports do not require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (e) All instances of deviations must be clearly identified in such reports. A reportable deviation is an exceedance of a permit limitation or a failure to comply with a requirement of the permit or a rule. It does not include:
- (1) An excursion from compliance monitoring parameters as identified in Section D of this permit unless tied to an applicable rule or limit; or
 - (2) A malfunction as described in 326 IAC 1-6-2; or
 - (3) Failure to implement elements of the Preventive Maintenance Plan unless lack of maintenance has caused or contributed to a deviation.
 - (4) Failure to make or record information required by the compliance monitoring provisions of Section D unless such failure exceeds 5% of the required data in any calendar quarter.

A Permittee's failure to take the appropriate response step when an excursion of a compliance monitoring parameter has occurred or failure to monitor or record the required compliance monitoring is a deviation.

- (f) Any corrective actions or response steps taken as a result of each deviation must be clearly identified in such reports.
- (g) The first report shall cover the period commencing on the date of operation and ending on the last day of the reporting period.

C.22 Annual Notification [326 IAC 2-6.1-5(a)(5)]

- (a) Annual notification shall be submitted to the Office of Air Management stating whether or not the source is in operation and in compliance with the terms and conditions contained in this permit.
- (b) Noncompliance with any condition must be specifically identified. If there are any permit conditions or requirements for which the source is not in compliance at any time during the year, the Permittee must provide a narrative description of how the source did or will achieve compliance and the date compliance was, or will be, achieved. The notification must be signed by an authorized individual.
- (c) The annual notice shall cover the time period from January 1 to December 31 of the previous year, and shall be submitted in the format attached no later than March 1 of each year to:

Compliance Data Section, Office of Air Management
Indiana Department of Environmental Management
100 North Senate Avenue, P.O. Box 6015
Indianapolis, IN 46206-6015

- (d) The notification shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAM, on or before the date it is due.

SECTION D.1

EMISSIONS UNIT OPERATION CONDITIONS

- (a) Eight (8) Twin Pac combustion turbine generator units, consisting of sixteen (16) simple cycle turbines and eight (8) generators, which each generator is directly connected to two (2) combustion turbines. The generators are designated as units G1 through G8, and the two (2) combustion turbines, which are directly connected to each generator, are designated as CT1 and CT2. The sixteen (16) combustion turbines have an anticipated maximum heat input capacity of 270.9 MMBTU/hr (Lower Heating Value, LHV) per turbine unit, a maximum nominal output of 25 MW per turbine, with water-injection for NO_x emissions control, and exhaust to sixteen (16) stacks designated as G1CT1S1 through G8CT2S2.
- (b) Natural gas-fired space heating equipment, with a maximum heat input capacity of 0.1 MMBtu/hr and exhaust to the atmosphere.
- (c) One (1) diesel-fired emergency fire pump, with a maximum heat input capacity of 1.0 MMBtu/hr and exhausts to the atmosphere.
- (d) One (1) fuel oil storage tank, with a maximum storage capacity of 400,000 gallons, a maximum volume of 55,418 ft³ and vents to the atmosphere.

The information describing the source contained in this Section D.1 is descriptive information, and does not constitute federally enforceable conditions.

D.1.1 PSD Minor Limit [326 IAC 2-2] [40 CFR 52.21]

- (a) The potential to emit of NO_x and CO from the sixteen (16) combustion turbines, natural gas heating equipment and one (1) diesel engine shall be limited to less than 250 tons per twelve (12) consecutive months per pollutant, rolled on a monthly basis. Therefore, the Prevention of Significant Deterioration (PSD) rules, 326 IAC 2-2 and 40 CFR 52.21, will not apply. This limit is required to limit the potential to emit of NO_x, CO, SO₂, PM, PM₁₀ and VOC to less than 250 tons per twelve (12) consecutive month period. Compliance with this limit makes 326 IAC 2-2 (Prevention of Significant Deterioration) and 40 CFR 52.21 not applicable.
- (b) The NO_x and CO emissions shall be limited by the following equations:
 - (1) NO_x emissions (tons per year) = Emissions from combustion turbines (tons per year, based on CEMs data) + natural gas usage from heating equipment (MMCF/yr) * appropriate AP-42 emission factor + fuel oil usage from engine (kgals/yr) * appropriate AP-42 emission factor.
 - (2) CO emissions (tons per year) = Emissions from combustion turbines (tons per year, based on CEMs data) + natural gas usage from heating equipment (MMCF/yr) * appropriate AP-42 emission factor + fuel oil usage from engine (kgals/yr) * appropriate AP-42 emission factor.
- (c) The sulfur content of the fuel oil shall not exceed 0.05 percent by weight.

D.1.2 40 CFR Part 60, Subpart GG Applicability (Stationary Gas Turbines)

- (a) The sixteen (16) combustion turbines are subject to 40 CFR Part 60, Subpart GG because the heat input at peak load is equal to or greater than 10.7 gigajoules per hour, based on the lower heating value of the fuel fired.
- (b) Pursuant to 326 IAC 12-1 and 40 CFR 60, Subpart GG (Stationary Gas Turbines), the Permittee shall:

- (1) limit nitrogen oxides emissions, as required by 40 CFR 60.332, to:

$$STD = 0.0075 \frac{(14.4)}{Y} + F,$$

where STD = allowable NO_x emissions (percent by volume at 15 percent oxygen on a dry basis).

Y = manufacturer's rated heat rate at manufacturer's rated load (kilojoules per watt hour) or, actual measured heat rate based on lower heating value of fuel as measured at actual peak load for the facility. The value of Y shall not exceed 14.4 kilojoules per watt hour.

F = NO_x emission allowance for fuel-bound nitrogen as defined in paragraph (a)(3) of 40 CFR 60.332.

- (2) limit sulfur dioxide emissions, as required by 40 CFR 60.333, to 0.015 percent by volume at 15 percent oxygen on a dry basis, or use natural gas fuel with a sulfur content less than or equal to 0.8 percent by weight.

D.1.3 326 IAC 2-4.1-1 (New Source Toxics Control)

The formaldehyde emission rate from each stack shall not exceed 0.000714 lb/mmBtu. This emission rate in combination with the emission limitations specified in Condition D.1.1, shall ensure that the single HAPs emissions do not exceed 10 tons per year and the combination HAPs do not exceed 25 tons per year.

- (a) The formaldehyde potential to emit shall be less than ten (10) tons per twelve (12) consecutive month period, rolled on a monthly basis.
- (b) The manganese potential to emit shall be less than ten (10) tons per twelve (12) consecutive month period, rolled on a monthly basis.
- (c) The combination of HAPs shall be less than twenty-five (25) tons per twelve (12) consecutive month period, rolled on a monthly basis.

D.1.4 40 CFR Part 60, Subpart Kb Applicability (Volatile Organic Storage Vessels)

- (a) The one (1) fuel oil storage tank is subject to 40 CFR Part 60, Subpart Kb because the maximum capacity is greater than 40 m³ and is used to store volatile organic liquids (including petroleum) for which construction, reconstruction, or modification commenced after July 23, 1984.
- (b) The fuel oil storage tank is exempt from the General Provisions (Part 60, subpart A) and from the provisions of this subpart because the tank has a capacity greater than or equal to 151 m³, storing liquid with a maximum true vapor pressure less than 3.5 kPa.
- (c) Pursuant to 40 CFR Part 60, Subpart Kb, the Permittee shall notify the Administrator and IDEM, OAM, within 30 days when the maximum true vapor pressure of the liquid exceeds the respective maximum true vapor pressure values for each volume range. (Available data on the storage temperature may be used to determine the maximum

vapor pressure as determined in 40 CFR Part 60.116b(e)(1)-(3)).

D.1.5 326 IAC 7-1.1-1 (Sulfur Dioxide Emission Limitations)

Pursuant to 326 IAC 7-1.1-2, sulfur dioxide emissions from fuel combustion facilities shall be limited to five-tenths (0.5) pounds per million Btu for distillate oil combustion.

D.1.6 Carbon Monoxide Emission Limitations [326 IAC 9-1]

This source is subject to 326 IAC 9-1 because it is a stationary source of CO emissions commencing operation after March 21, 1972. There are no applicable CO emission limits, under this state rule, established for this type of operation.

Compliance Determination Requirements

D.1.7 Testing Requirements [326 IAC 2-1.1-5][40 CFR Part 60.8][326 IAC 3-5]

- (a) Pursuant to 326 IAC 3-5 the Permittee shall conduct a performance test, not later than one-hundred and eighty (180) days after a facility start-up or monitor installation, on the combustion turbines' exhaust stacks (designated as G1CT1S1 through G8CT2S2) in order to certify the continuous emission monitoring system for NOx and CO.
- (b) Within sixty (60) days after achieving maximum production rate, but no later than one-hundred and eighty (180) days after initial start-up, the Permittee shall conduct NOx and SO₂ stack tests for each turbine utilizing methods as approved by the Commissioner. These tests shall be performed in accordance with 40 CFR Part 60.335 and Section C - Performance Testing, in order to document compliance with Conditions D.1.2.
- (c) Within sixty (60) days after initial start-up, but no later than one-hundred and eighty (180) days after initial start-up, the Permittee shall perform formaldehyde stack tests for each turbine (stacks designated as G1CT1S1 through G8CT2S2) utilizing methods as approved by the Commissioner when operating at loads of 50%, 75% and 100%. These tests shall be performed in accordance Section C - Performance Testing, in order to verify the formaldehyde emission rate as specified in Condition D.1.3.
- (d) IDEM may require compliance testing at any specific time when necessary to determine if the source is in compliance. If testing is required by IDEM, compliance with the NOx and CO limits specified in Condition D.1.1, shall be determined by a performance test conducted in accordance with Section C - Performance Testing.

D.1.8 40 CFR Part 60, Subpart GG Compliance Requirements (Stationary Gas Turbines)

Pursuant to 40 CFR Part 60, Subpart GG (Stationary Gas Turbines), the Permittee shall monitor the nitrogen and sulfur content of the natural gas on a daily basis as follows:

- (a) install a continuous monitoring system to monitor and record the fuel consumption and the ratio of water to fuel being fired in the turbine, as required by 40 CFR 60.334(a);
- (b) On March 24, 2000, the Montpelier Electric Generating Station was issued a custom schedule for Subpart GG by the USEPA, Region V. The custom schedule is as follows:
 - (i) Use of natural gas as the primary fuel for the combustion turbines;
 - (ii) Shall use number 2 fuel oil as a back-up fuel source only. The source shall take a total gallons per year limit on the diesel fuel. The limitation is as follows:

The total input of number 2 fuel oil to each of the sixteen (16) combustion turbines shall be limited to 197.7 kilo-gallons per twelve consecutive month period per turbine, rolled on a monthly basis. This usage limitation is equivalent

to 11.76 tons of SO₂ per year and 37.6 tons of NO_x per year; and

- (iii) Continuously monitor the SO₂ and NO_x per the requirements of 40 CFR Part 75. These requirements include, but are not limited to 40 CFR Parts 75.10, 75.11 and 75.12.

D.1.9 Continuous Emission Monitoring System (CEMS) [326 IAC 3-5]

- (a) Pursuant to 326 IAC 3-5-1(d)(1), the owner or operator of a new source with an emission limitation or permit requirement established under 326 IAC 326 IAC 2-5.1-3 and 2-6.1 shall be required to install a continuous emissions monitoring system or alternative monitoring plan as allowed under the Clean Air Act and 326 IAC 3-5.
- (b) For NO_x and CO, the Permittee shall install, calibrate, certify, operate and maintain a continuous emissions monitoring system for stacks designated as G1CT1S1 through G8CT2S2, in accordance with 326 IAC 3-5-2 and 3-5-3.
 - (1) The continuous emission monitoring system (CEMS) shall measure NO_x and CO emissions rates in pounds per hour. The use of CEMS to measure and record the NO_x and CO hourly emission rates, is sufficient to demonstrate compliance with the annual limits established in the Condition D.1.1.
 - (2) The Permittee shall submit to IDEM, OAM, within ninety (90) days after monitor installation, a complete written continuous monitoring standard operating procedure (SOP), in accordance with the requirements of 326 IAC 3-5-4.
 - (3) The Permittee shall record the output of the system and shall perform the required record keeping, pursuant to 326 IAC 3-5-6, and reporting, pursuant to 326 IAC 3-5-7.
- (c) In instances of downtime, the source shall use EPA's AP-42 emission factors for stationary gas turbines, to demonstrate compliance with the CO emission limit and use the Missing Data Substitution Procedures outlined in 40 CFR Part 75, Subpart D to demonstrate compliance with the NO_x emission limit, both established under Condition D.1.1.
- (d) The source may submit to OAM alternative emission factors based on the source's CEMS data, to use in lieu of the AP-42 emission factors in instances of downtime. The alternative emissions factors must be approved by OAM prior to use in calculating emissions for the limitations established in this construction permit. The alternative emission factors shall be based upon collected monitoring and test data supplied from an approved continuous emission monitoring system and/or approved performance tests. In the event that the information submitted does not contain sufficient data to establish appropriate emission factors, the source shall continue to collect data until appropriate emission factors can be established. During this period of time, the source shall continue to use AP-42 emission factors for CO and the NO_x Missing Data Substitution Procedures specified in 40 CFR Part 75, Subpart D, in periods of downtime.

D.1.10 326 IAC 7-2 [Sulfur Content Compliance]

Pursuant to 326 IAC 7-2-1, the Permittee shall demonstrate that the fuel oil sulfur content does not exceed 0.5 pounds per million Btus by:

- (1) Fuel sampling and analysis data shall be collected pursuant to procedures specified in 326 IAC 3-7-4 for oil combustion, and these data may be used to determine compliance or noncompliance with the emission limitations contained in 326 IAC 7-1.1. Computation of calculated sulfur dioxide emission rates from fuel sampling and analysis data shall be

based on AP-42 emission factors, unless other emission factors based on site specific sulfur dioxide measurements are approved by the commissioner and the USEPA. Fuel sampling and analysis data shall be collected as follows:

- (a) compliance or noncompliance shall be determined by using a calendar month average sulfur dioxide emission rate in pounds per million Btus unless a shorter averaging time or alternate methodology is specified under 326 IAC 7-2. Providing vendor analysis of fuel delivered, if accompanied by a certification; or
- (b) compliance or noncompliance shall be determined by using a calendar month average sulfur dioxide emission rate in pounds per million Btus unless a shorter averaging time or alternate methodology is specified under 326 IAC 7-2. Analyzing the oil sample to determine the sulfur content of the oil via the procedures in 40 CFR 60, Appendix A, Method 19.
 - (i) Oil samples may be collected from the fuel tank immediately after the fuel tank is filled and before any oil is combusted; and
 - (ii) If a partially empty fuel tank is refilled, a new sample and analysis would be required upon filling
- (2) Compliance or noncompliance with the emission limitation specified in 326 IAC 7-1.1 may be determined by conducting a stack test for sulfur dioxide emissions from the sixteen (16) combustion turbines, using 40 CFR 60, Appendix A, Method 6, 6A, 6C, or 8, in accordance with the procedures in 326 IAC 3-6.
- (3) Upon written notification of a facility owner or operator to the department, continuous emission monitoring data collected and reported pursuant to 326 IAC 3-5 may be used as the means for determining compliance.
- (4) A determination of noncompliance pursuant to either of the methods specified in (1), (2) or (3) above shall not be refuted by evidence of compliance pursuant to the other method.

Record Keeping and Reporting Requirements [326 IAC 2-1-3]

D.1.11 Record Keeping Requirements

-
- (a) To document compliance with Condition D.1.1 and D.1.3, the Permittee shall maintain records of the following:
 - (1) amount of natural gas combusted (in MMCF) and fuel oil (in gallons) per unit (turbine, heating equipment and fire pump engine) during each month;
 - (2) the percent sulfur content of the natural gas (if other than pipeline quality natural gas which is defined as natural gas that is provided by a supplier through a pipeline; 40 CFR Part 72.2) and fuel oil of each unit (turbine and fire pump engine);
 - (3) the emission rates of NO_x and CO in pounds per hour (based on CEMS data); and
 - (4) the Permittee shall maintain records required under 326 IAC 3-5-6 at the source in a manner so that they may be inspected by the IDEM, OAM, or the U.S. EPA., if so requested or required.

- (b) To document compliance with D.1.2, the source shall maintain records of the natural gas analyses, including the sulfur and nitrogen content of the gas, for a period of three (3) years.
- (c) To document compliance with Condition D.1.4, the Permittee shall:
 - (1) maintain the records of the volatile organic liquid (VOL) stored;
 - (2) the period of storage;
 - (3) the maximum true vapor pressure of the volatile organic liquid (VOL) during the respective storage period; and
 - (4) shall keep readily accessible records showing the dimension of the storage vessel and an analysis showing the capacity of the storage vessel.
- (d) To document compliance with Condition D.1.5, the Permittee shall maintain records in accordance with (1) through (6) below. Records maintained for (1) through (6) shall be taken monthly and shall be complete and sufficient to establish compliance with the SO₂ emission limit established in Condition D.1.5
 - (1) Calendar dates covered in the compliance determination period;
 - (2) Actual fuel oil usage since last compliance determination period and equivalent sulfur dioxide emissions;
 - (3) A certification, signed by the owner or operator, that the records of the fuel supplier certifications represent all of the fuel combusted during the period, the natural gas fired boiler certification does not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34); and

If the fuel supplier certification is used to demonstrate compliance the following, as a minimum, shall be maintained:

 - (4) Fuel supplier certifications;
 - (5) The name of the fuel supplier; and
 - (6) A statement from the fuel supplier that certifies the sulfur content of the fuel oil.
- (e) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.1.12 Reporting Requirements

- (a) The Permittee shall submit a quarterly excess emissions report, if applicable, based on the continuous emissions monitor (CEM) data for NO_x and CO, pursuant to 326 IAC 3-5-7. These reports shall be submitted within thirty (30) calendar days following the end of each calendar quarter and in accordance with Section C - General Reporting Requirements of this permit.
- (b) A quarterly summary of the information to document compliance with D.1.1, D.1.3 and D.1.8 shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit,

or their equivalent, within thirty (30) days after the end of the quarter being reported.

- (c) The Permittee shall report periods of excess emissions, as required by 40 CFR 60.334(c).
- (d) The Permittee shall submit reports of calendar month average sulfur content, heat content, fuel consumption, and sulfur dioxide emission rate in pounds per million Btus upon request based on fuel sampling and analysis data in accordance with procedures specified under 326 IAC 3-3 to document compliance with D.1.5.
- (e) These reports shall be submitted within thirty (30) calendar days following the end of each calendar quarter and shall be in accordance with Section C - General Reporting Requirements of this permit.

**Indiana Department of Environmental Management
Office of Air Management
Compliance Data Section**

Quarterly Report

Company Name: Montpelier Electric Generating Station
Location: 8265 South 450 West, Poneto, Indiana 46781
Permit No.: 179-12321-00026
Source: Sixteen (16) combustion turbines, natural gas-fired heating equipment
and one (1) diesel-fired engine
Pollutant: CO
Limit: Less than 250 tons per twelve (12) consecutive month period

Year: _____

Month	CO Emissions (tons/ month)	Total CO Emissions for previous eleven months (tons/ month)	Total CO Emissions for twelve month period (tons)
-------	----------------------------------	---	---

–	Sixteen (16) turbines	Heating Equipment	One (1) fire- water pump engine	--	--
1					
2					
3					

9 No deviation occurred in this quarter.

9 Deviation/s occurred in this quarter.
Deviation has been reported on: _____

Submitted by: _____
Title / Position: _____
Signature: _____
Date: _____
Phone: _____

**Indiana Department of Environmental Management
Office of Air Management
Compliance Data Section**

Quarterly Report

Company Name: Montpelier Electric Generating Station
Location: 8265 South 450 West, Poneto, Indiana 46781
Permit No.: 179-12321-00026
Source: Sixteen (16) combustion turbines, natural gas-fired heating equipment and one (1) diesel-fired engine
Pollutant: NOx
Limit: Less than 250 tons per twelve (12) consecutive month period

Year: _____

Month	NOx Emissions (tons/ month)			Total NOx Emissions for previous eleven months (tons/ month)	Total NOx Emissions for twelve month period (tons)
—	Sixteen (16) turbines	Heating Equipment	One (1) fire-water pump engine	—	--
1					
2					
3					

9 No deviation occurred in this quarter.

9 Deviation/s occurred in this quarter.
Deviation has been reported on: _____

Submitted by: _____
Title / Position: _____
Signature: _____
Date: _____
Phone: _____

Quarterly Report

Year: _____

[illegible]

	Fuel Oil Usage (gallons/month)				Fuel Oil Usage for previous month(s) (gallons)				Fuel Oil Usage for twelve month period (gallons)			
Month/ Turbine	9	10	11	12	9	10	11	12	9	10	11	12

	Fuel Oil Usage (gallons/month)				Fuel Oil Usage for previous month(s) (gallons)				Fuel Oil Usage for twelve month period (gallons)			
Month/ Turbine	13	14	15	16	13	14	15	16	13	14	15	16

9 No deviation occurred in this quarter.

9 Deviation/s occurred in this quarter.
Deviation has been reported on: _____

Submitted by: _____
Title / Position: _____
Signature: _____
Date: _____
Phone: _____

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR MANAGEMENT
COMPLIANCE DATA SECTION**

**MINOR SOURCE OPERATING PERMIT
ANNUAL NOTIFICATION**

This form should be used to comply with the notification requirements under 326 IAC 2-6.1-5(a)(5).

Company Name:	Montpelier Electric Generating Station
Address:	8265 South 450 West
City:	Poneto, Indiana 46781
Phone #:	(937) 865-6233
MSOP #:	179-12321-00026

I hereby certify that **Montpelier Electric Generating Station** is ☒ still in operation.
☐ no longer in operation.

I hereby certify that **Montpelier Electric Generating Station** is ☒ in compliance with the requirements of MSOP **179-12321-00026**.
☐ not in compliance with the requirements of MSOP **179-12321-00026**.

Authorized Individual (typed):
Title:
Signature:
Date:

If there are any conditions or requirements for which the source is not in compliance, provide a narrative description of how the source did or will achieve compliance and the date compliance was, or will be achieved.

Noncompliance:

MALFUNCTION REPORT

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT OFFICE OF AIR MANAGEMENT FAX NUMBER - 317 233-5967

**This form should only be used to report malfunctions applicable to Rule 326 IAC 1-6
and to qualify for the exemption under 326 IAC 1-6-4.**

THIS FACILITY MEETS THE APPLICABILITY REQUIREMENTS BECAUSE IT HAS POTENTIAL TO EMIT 25 TONS/YEAR PARTICULATE MATTER ?_____, 25 TONS/YEAR SULFUR DIOXIDE ?_____, 25 TONS/YEAR NITROGEN OXIDES?_____, 25 TONS/YEAR VOC ?_____, 25 TONS/YEAR HYDROGEN SULFIDE ?_____, 25 TONS/YEAR TOTAL REDUCED SULFUR ?_____, 25 TONS/YEAR REDUCED SULFUR COMPOUNDS ?_____, 25 TONS/YEAR FLUORIDES ?_____, 100TONS/YEAR CARBON MONOXIDE ?_____, 10 TONS/YEAR ANY SINGLE HAZARDOUS AIR POLLUTANT ?_____, 25 TONS/YEAR ANY COMBINATION HAZARDOUS AIR POLLUTANT ?_____, 1 TON/YEAR LEAD OR LEAD COMPOUNDS MEASURED AS ELEMENTAL LEAD ?_____, OR IS A SOURCE LISTED UNDER 326 IAC 2-5.1-3(2) ?_____. EMISSIONS FROM MALFUNCTIONING CONTROL EQUIPMENT OR PROCESS EQUIPMENT CAUSED EMISSIONS IN EXCESS OF APPLICABLE LIMITATION _____.

THIS MALFUNCTION RESULTED IN A VIOLATION OF: 326 IAC _____ OR, PERMIT CONDITION # _____ AND/OR PERMIT LIMIT OF _____

THIS INCIDENT MEETS THE DEFINITION OF 'MALFUNCTION' AS LISTED ON REVERSE SIDE ? Y N

THIS MALFUNCTION IS OR WILL BE LONGER THAN THE ONE (1) HOUR REPORTING REQUIREMENT ? Y N

COMPANY: Montpelier Electric Generating Station _PHONE NO. (937) 865-6233

LOCATION: (CITY AND COUNTY): Poneto/Wells

PERMIT NO. 179-12321 AFS PLANT ID: 179-00026

AFS POINT ID: _____ INSP: _____

CONTROL/PROCESS DEVICE WHICH MALFUNCTIONED AND REASON: _____

DATE/TIME MALFUNCTION STARTED: ____/____/2000 AM / PM

ESTIMATED HOURS OF OPERATION WITH MALFUNCTION CONDITION: _____

DATE/TIME CONTROL EQUIPMENT BACK-IN SERVICE ____/____/20____ AM/PM

TYPE OF POLLUTANTS EMITTED: TSP, PM-10, SO₂, VOC, OTHER: _____

ESTIMATED AMOUNT OF POLLUTANT EMITTED DURING MALFUNCTION: _____

MEASURES TAKEN TO MINIMIZE EMISSIONS: _____

REASONS WHY FACILITY CANNOT BE SHUTDOWN DURING REPAIRS:

CONTINUED OPERATION REQUIRED TO PROVIDE ESSENTIAL* SERVICES: _____

CONTINUED OPERATION NECESSARY TO PREVENT INJURY TO PERSONS: _____

CONTINUED OPERATION NECESSARY TO PREVENT SEVERE DAMAGE TO EQUIPMENT: _____

INTERIM CONTROL MEASURES: (IF APPLICABLE) _____

MALFUNCTION REPORTED BY: _____ TITLE: _____
(SIGNATURE IF FAXED)

MALFUNCTION RECORDED BY: _____ DATE: _____ TIME: _____

*SEE PAGE 2

**Please note - This form should only be used to report malfunctions
applicable to Rule 326 IAC 1-6 and to qualify for
the exemption under 326 IAC 1-6-4.**

326 IAC 1-6-1 Applicability of rule

Sec. 1. This rule applies to the owner or operator of any facility required to obtain a permit under 326 IAC 2-5.1 or 326 IAC 2-6.1.

326 IAC 1-2-39 "Malfunction" definition

Sec. 39. Any sudden, unavoidable failure of any air pollution control equipment, process, or combustion or process equipment to operate in a normal and usual manner.

***Essential services** are determined on a case by case basis by the Indiana Department of Environmental Management. Continued operation solely for the economic benefit of the owner or operator shall not be sufficient reason why a facility cannot be shutdown during a control equipment shutdown.

If this item is checked on the front, please explain rationale:

Indiana Department of Environmental Management Office of Air Management

Addendum to the Technical Support Document for New Source Construction and Minor Source Operating Permit

Source Name: Montpelier Electric Generating Station
 Source Location: 8265 South 450 West, Poneto, Indiana 46781
 County: Wells
 SIC Code: 4911
 Operation Permit No.: 179-12321-00026
 Permit Reviewer: Nysa L. James

On July 20, 2000, the Office of Air Management (OAM) had a notice published in the Bluffton News Banner, Bluffton, Indiana, stating that Montpelier Electric Generating Station had applied for a construction permit to construct and operate an electric generating station with control. The notice also stated that OAM proposed to issue a permit for this installation and provided information on how the public could review the proposed permit and other documentation. Finally, the notice informed interested parties that there was a period of thirty (30) days to provide comments on whether or not this permit should be issued as proposed.

On August 15, 2000, Montpelier Electric Generating Station submitted comments on the proposed construction and operating permit. The summary of the comments and corresponding responses is as follows (changes are bolded and crossed out for emphasis):

Comment 1: The mailing address has changed. The new mailing address is 8150 Washington Village Drive, Centerville, Ohio 45458. In addition, the phone number has changed to 937-331-3142.

Response 1: Section A.1, General Information listed on page 4 of 27, is revised as follows to reflect the new mailing address (changes are bolded and crossed out for emphasis):

A.1 General Information [326 IAC 2-5.1-3(c)] [326 IAC 2-6.1-4(a)]

The Permittee owns and operates an electric generating station.

Authorized Individual:	Kirk N. Guy
Source Address:	8265 South 450 West, Poneto, Indiana 46781
Mailing Address:	1985 Founders Drive, Kettering, Ohio 45420 8150 Washington Village Drive, Centerville, Ohio 45458
Phone Number:	(937) 331-3042 (937) 331-3142
SIC Code:	4911
County Location:	Wells
County Status:	Attainment for all criteria pollutants
Source Status:	Minor Source, under PSD or Emission Offset Rules; Minor Source, Section 112 of the Clean Air Act

Comment 2: Section C.15(a)(5) requires that a Compliance Response Plan (CRP) be submitted under 326 IAC 1-6. 326 IAC 1-6-3 requires the preparation of a Preventive Maintenance Plan, addressed in Condition C.1. 326 IAC 1-6-6 requires the submission of a Malfunction Emission Reduction Program within 180 days of the commencement of operation. IDEM should remove this condition or revise it to refer to the submission of a Malfunction Emission Reduction Program within 180 days of the commencement of operation.

Response 2: Condition C.15 is revised as follows to contain more detailed requirements listed under 326 IAC 1-6. (changes are bolded and crossed out for emphasis):

C.15 ~~Compliance Monitoring Plan - Failure to Take Response Steps~~ **Malfunction Emission Reduction Program** [326 IAC 1-6]

(a) ~~The Permittee is required to implement a compliance monitoring plan to ensure that reasonable information is available to evaluate its continuous compliance with applicable requirements. submit a~~ **malfunction emission rate reduction program within one-hundred eighty (180) days after the commencement of operation. The program shall include, but not limited to, the normal operating emission rate and the program proposed to reduce emissions in the event of a malfunction to an emission rate that will not contribute to the cause of the violation of the ambient air quality standards established in 326 IAC 1-3. The program shall be based on the best estimates of type and number of startups, shutdowns, and malfunctions experienced during normal operation of the facility or emission control device and the scope and duration of such conditions. This program may be subject to review and approval by the Commissioner. This compliance monitoring plan is comprised of:**

~~(1) This condition;~~

~~(2) The Compliance Determination Requirements in Section D of this permit;~~

~~(3) The Compliance Monitoring Requirements in Section D of this permit;~~

~~(4) The Record Keeping and Reporting Requirements in Section G (Monitoring Data Availability, General Record Keeping Requirements, and General Reporting Requirements) and in Section D of this permit; and~~

~~(5) A Compliance Response Plan (CRP) for each compliance monitoring condition of this permit. CRP's shall be submitted to IDEM, OAM upon request and shall be subject to review and approval by IDEM, OAM. The CRP shall be prepared upon commencement of the operation by the Permittee and maintained on site, and is comprised of:~~

~~(A) Response steps that will be implemented in the event that compliance related information indicates that a response step is needed pursuant to the requirements of Section D of this permit; and~~

~~(B) A time schedule for taking such response steps including a schedule for devising additional response steps for situations that may not have been predicted.~~

(b) For each compliance monitoring condition of this permit, appropriate response steps shall be taken when indicated by the provisions of that compliance monitoring condition. Failure to perform the actions detailed in the compliance monitoring conditions or failure to take the response

steps within the time prescribed in the ~~Compliance Response Plan~~ **Malfunction Emission Reduction Program**, shall constitute a violation of the permit unless taking the response steps set forth in the ~~Compliance Response Plan~~ **Malfunction Emission Reduction Program** would be unreasonable.

- (c) After investigating the reason for the excursion, the Permittee is excused from taking further response steps for any of the following reasons:
 - (1) The monitoring equipment malfunctioned, giving a false reading. This shall be an excuse from taking further response steps providing that prompt action was taken to correct the monitoring equipment.
 - (2) The Permittee has determined that the compliance monitoring parameters established in the permit conditions are technically inappropriate, has previously submitted a request for an administrative amendment to the permit, and such request has not been denied or;
 - (3) An automatic measurement was taken when the process was not operating; or
 - (4) The process has already returned to operating within "normal" parameters and no response steps are required.
- (d) Records shall be kept of all instances in which the compliance related information was not met and of all response steps taken.

Comment 3: The Montpelier Electric Generating station will be an unmanned location at times. DPL requests this condition be modified to allow records to be kept at a remote location for a minimum of three years and available upon request. Since this facility can and will be remotely operated, many of the records will be kept off-site.

Response 3: Condition C.20(a), Record Keeping Requirement, is revised as follows to allow for unmanned stations to have another location to maintain records (changes are bolded and crossed out for emphasis):

C.20 General Record Keeping Requirements [326 IAC 2-6.1-2]

- (a) Records of all required monitoring data and support information shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. These records shall be kept at the source location, **or at an accessible location such that the records could be made available within one (1) hour upon request, and provided that OAM is notified in writing prior**, for a minimum of three (3) years and available upon the request of an IDEM, OAM representative. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a written request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.

Comment 4: The reference to the Compliance Monitoring plan should be removed from the record Keeping Requirement under C.20(c)4() or revised accordingly to properly refer to the

Malfunction Emission Reduction Program.

Response 4: Condition C.20(c), Record Keeping Requirements, is revised as follows to reflect the proper program through which the source is required to respond to a malfunction (changes are bolded and crossed out for emphasis):

(c) Support information shall include, where applicable:

- (1) Copies of all reports required by this permit;
- (2) All original strip chart recordings for continuous monitoring instrumentation;
- (3) All calibration and maintenance records;
- (4) Records of preventive maintenance shall be sufficient to demonstrate that failure to implement the Preventive Maintenance Plan did not cause or contribute to a violation of any limitation on emissions or potential to emit. To be relied upon subsequent to any such violation, these records may include, but are not limited to: work orders, parts inventories, and operator's standard operating procedures. Records of response steps taken shall indicate whether the response steps were performed in accordance with the ~~Compliance Response Plan~~ **Malfunction Emission Reduction Program** required by Section C - ~~Compliance Monitoring Plan - Failure to take Response Steps~~ **Malfunction Emission Reduction Program**, of this permit, and whether a deviation from a permit condition was reported. All records shall briefly describe what maintenance and response steps were taken and indicate who performed the tasks.

Comment 5: The reference to rule 326 IAC 2-6.1-2 in C.21, should be removed as it applies to existing sources, not new sources such as this one.

Response 5: This permit is a new source construction and a minor source operating permit pursuant to 326 IAC 2-6.1 when, prior to start of operation, the criteria outlined in Condition B.6 are met. Therefore, the rule cite in Condition C.21, Reporting Requirements is correct and will remain in the permit because this permit not only allows construction, but also allows the source to operate under the Minor Source Operating rule (326 IAC 2-6) until the source is issued another type of operating permit.

Comment 6: The provisions of rule 326 IAC 2-1-3.4 do not apply to this source. Condition D.1.3 should be removed. As stated in the technical support document, the limited potential to emit (PTE) of a single hazardous air pollutant (HAP) is less than 10 tons per year (TPY) and the limited PTE of the combination of HAPs is less than twenty-five TPY. Therefore, 326 IAC 2-1-3.4 does not apply.

Response 6: The potential to emit of Manganese and Formaldehyde is above the ten (10) ton per year threshold listed in 326 IAC 2-4.1, based on using the new USEPA emission factors (April, 2000). Based on the potential to emit of such pollutants above the ten (10) ton per year threshold, the source must take limits on such pollutants in order to make 326 IAC 2-4.1 (New Source Toxics Control Rule) not applicable. These limits must be considered federally enforceable in order for the rule not to be applicable. Condition D.1.3 specifically lists the two (2) hazardous air pollutants that have the potential to emit above the specific single pollutant threshold and requires a less than ten (10) per year limit on each pollutant. In addition to these limits, the total combination of hazardous air

pollutants (HAPs) has a potential to emit above twenty-five (25) tons per year, therefore there is also a limit on the combination of HAPs. In addition to placing enforceable limits in the permit to ensure that the HAPs do not go above the thresholds listed in 326 IAC 2-4.1, the OAM must make such limits practically enforceable through testing, monitoring, record keeping and reporting. This is necessary to demonstrate that the emissions are below such limits. This condition shall not be removed for the reasons listed above.

Comment 7: Condition D.1.7 should be removed. It is appropriately referenced in Section B and does not constitute an operating condition that should be listed under Section D.

Response 7: Since the Preventive Maintenance Plan is already required under Condition C.2, the OAM shall remove Condition D.1.7 because it is redundant. The following conditions are re-numbered accordingly.

Comment 8: Condition D.1.8 contains paragraphs 1, 2, 3 and d. These should be revised to read a, b, c and d.

Response 8: The OAM's copy of the draft permit does not contain 1, 2, 3 and d. Condition D.1.8 is outlined with a-d.

Comment 9: Condition D.1.8(c) should be removed. This facility is expected to emit well-below ten tons per year of any hazardous air pollutant. The New Source Toxics rule does not apply to this facility. Further, IDEM has previously established in D.1.3 that the "requirements of 326 IAC 2-4.1 do not apply. Since the NO_x and CO are the limiting pollutants of this source, the NO_x and CO limits established in the permit are sufficient to demonstrate compliance with the formaldehyde, manganese and the combination of HAPs limits established above." Since the NO_x and CO are the limiting pollutants, there is no reason to require formaldehyde testing. Annual emissions are estimated to be well below ten tons per year. Additionally, the requirements to test at multiple loads is unnecessary and without merit. This requirement alone will cost more than \$75,000 and seven weeks to complete. IDEM should remove this condition in its entirety.

Response 9: As stated above, the potential to emit limits listed in Condition D.1.3 are required to limit such hazardous air pollutant emissions below the thresholds outlined in 326 IAC 2-1.4. IDEM does recognize that NO_x and CO are the limiting pollutants of this source. By limiting such pollutants, formaldehyde and manganese emissions will be below the 10 ton per year threshold. Also, the combination of hazardous air pollutants will be less than the 25 ton per year threshold. IDEM has determined that by reporting the NO_x and CO emissions, demonstrating that these pollutants are less than 250 tons per year, manganese, formaldehyde the combination of hazardous air pollutants will also be demonstrated to be below their respective thresholds. However, the stack testing requirements are required to demonstrate that the emission value used to calculate the potential to emit of formaldehyde is correct and valid. Even though the OAM used the recent USEPA emission factors for such pollutant, this value was based on data that varied based on the type of turbine, the temperature tested at, the type of control and the load. Based on the variability of the emission factor, the OAM will require testing of formaldehyde to ensure that the emission factor used is appropriate.

Comment 10: Condition D.1.11(a) should allow for the use of supplier analyses. Since the oil supplier samples the oil as the condition of purchase, it should not be necessary to sample the oil in the tank, after it is filled.

Response 11: Condition D.1.11, now re-numbered as D.1.10, requires the source to determine compliance with the SO₂ emission limitation established under Condition D.1.5, pursuant to the analysis methods listed under 326 IAC 3-7-4. 326 IAC 3-7-4 does allow

for alternative equivalent procedures, or rely upon equivalent sampling and analysis procedures performed by the vendor prior to delivery of the fuel oil to the owner or operator. Therefore, Condition D.1.10 is revised as follows to allow for vendor analysis of the fuel oil (changes are bolded and crossed out for emphasis):

D.1.10 326 IAC 7-2 [Sulfur Content Compliance]

Pursuant to 326 IAC 7-2-1, the Permittee shall demonstrate that the fuel oil sulfur content does not exceed 0.5 pounds per million Btu by:

- (1) Fuel sampling and analysis data shall be collected pursuant to procedures specified in 326 IAC 3-7-4 for oil combustion, and these data may be used to determine compliance or noncompliance with the emission limitations contained in 326 IAC 7-1.1. Computation of calculated sulfur dioxide emission rates from fuel sampling and analysis data shall be based on AP-42 emission factors, unless other emission factors based on site specific sulfur dioxide measurements are approved by the commissioner and the USEPA. Fuel sampling and analysis data shall be collected as follows:
 - (a) **compliance or noncompliance shall be determined by using a calendar month average sulfur dioxide emission rate in pounds per million Btu unless a shorter averaging time or alternate methodology is specified under 326 IAC 7-2. Providing vendor analysis of fuel delivered, if accompanied by a certification; or**
 - (~~a~~b) compliance or noncompliance shall be determined by using a calendar month average sulfur dioxide emission rate in pounds per million Btu unless a shorter averaging time or alternate methodology is specified under 326 IAC 7-2. Analyzing the oil sample to determine the sulfur content of the oil via the procedures in 40 CFR 60, Appendix A, Method 19.
 - (in) Oil samples may be collected from the fuel tank immediately after the fuel tank is filled and before any oil is combusted; and
 - (ii) If a partially empty fuel tank is refilled, a new sample and analysis would be required upon filling
- (2) Compliance or noncompliance with the emission limitation specified in 326 IAC 7-1.1 may be determined by conducting a stack test for sulfur dioxide emissions from the sixteen (16) combustion turbines, using 40 CFR 60, Appendix A, Method 6, 6A, 6C, or 8, in accordance with the procedures in 326 IAC 3-6.
- (3) Upon written notification of a facility owner or operator to the department, continuous emission monitoring data collected and reported pursuant to 326 IAC 3-5 may be used as the means for determining compliance.
- (4) A determination of noncompliance pursuant to either of the methods specified in (1), (2) or (3) above shall not be refuted by evidence of compliance pursuant to the other method.

Upon further review, OAM has made the following changes (changes are bolded and crossed out for emphasis):

1. Condition D.1.9, 40 CFR Part 60, Subpart GG Compliance Requirements, is revised to reflect the correct fuel oil usage limitation. This was a typographical error in the draft permit and is revised as follows (changes are bolded and crossed out for emphasis):

D.1.9 40 CFR Part 60, Subpart GG Compliance Requirements (Stationary Gas Turbines)

Pursuant to 40 CFR Part 60, Subpart GG (Stationary Gas Turbines), the Permittee shall monitor the nitrogen and sulfur content of the natural gas on a daily basis as follows:

- (a) install a continuous monitoring system to monitor and record the fuel consumption and the ratio of water to fuel being fired in the turbine, as required by 40 CFR 60.334(a);
- (b) On March 24, 2000, the Montpelier Electric Generating Station was issued a custom schedule for Subpart GG by the USEPA, Region V. The custom schedule is as follows:

- (in) Use of natural gas as the primary fuel for the combustion turbines;

- (ii) Shall use number 2 fuel oil as a back-up fuel source only. The source shall take a total gallons per year limit on the diesel fuel. The limitation is as follows:

The total input of ~~the~~ number 2 fuel oil to **each** of the sixteen (16) combustion turbines shall be limited to ~~2,899.85~~ **197.7** kilo-gallons per twelve consecutive month period **per turbine**, rolled on a monthly basis. This usage limitation is equivalent to ~~446.0~~ **11.76** tons of SO₂ per year and ~~392.0~~ **37.6** tons of NOx per year **when burning fuel oil**; and

- (iii) Continuously monitor the SO₂ and NOx per the requirements of 40 CFR Part 75. These requirements include, but are not limited to 40 CFR Parts 75.10, 75.11 and 75.12.

2. Since the source requested and the OAM approved, that vendor analysis of the fuel oil be an alternative method to determine compliance with the emission limitation established under Condition D.1.5. The record keeping requirements listed in Condition D.1.12 are revised as follows to reflect the alternative compliance determination method (changes are bolded and crossed out for emphasis):

D.1.12 Record Keeping Requirements

- (a) To document compliance with Condition D.1.1 and D.1.3, the Permittee shall maintain records of the following:
 - (1) amount of natural gas combusted (in MMCF) and fuel oil (in gallons) per unit (turbine, heating equipment and fire pump engine) during each month;
 - (2) the percent sulfur content of the natural gas (if other than pipeline quality natural gas which is defined as natural gas that is provided by a supplier through a pipeline; 40 CFR Part 72.2) and fuel oil of each unit (turbine and fire pump engine);
 - (3) the emission rates of NOx and CO in pounds per hour (based on CEMS data); and
 - (4) the Permittee shall maintain records required under 326 IAC 3-5-6 at the

source in a manner so that they may be inspected by the IDEM, OAM, or the U.S. EPA., if so requested or required.

- (b) To document compliance with D.1.2, the source shall maintain records of the natural gas analyses, including the sulfur and nitrogen content of the gas, for a period of three (3) years.
- (c) To document compliance with Condition D.1.4, the Permittee shall:
 - (1) maintain the records of the volatile organic liquid (VOL) stored;
 - (2) the period of storage;
 - (3) the maximum true vapor pressure of the volatile organic liquid (VOL) during the respective storage period; and
 - (4) shall keep readily accessible records showing the dimension of the storage vessel and an analysis showing the capacity of the storage vessel.
- (d) **To document compliance with Condition D.1.5, the Permittee shall maintain records in accordance with (1) through (6) below. Records maintained for (1) through (6) shall be taken monthly and shall be complete and sufficient to establish compliance with the SO₂ emission limit established in Condition D.1.5**
 - (1) **Calendar dates covered in the compliance determination period;**
 - (2) **Actual fuel oil usage since last compliance determination period and equivalent sulfur dioxide emissions;**
 - (3) **A certification, signed by the owner or operator, that the records of the fuel supplier certifications represent all of the fuel combusted during the period, the natural gas fired boiler certification does not require the certification by the “responsible official” as defined by 326 IAC 2-7-1(34); and**

If the fuel supplier certification is used to demonstrate compliance the following, as a minimum, shall be maintained:

 - (4) **Fuel supplier certifications;**
 - (5) **The name of the fuel supplier; and**
 - (6) **A statement from the fuel supplier that certifies the sulfur content of the fuel oil.**
- (~~de~~) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

3. Condition D.1.3, 326 IAC 2-4.1-1 (New Source Toxics Control) is revised to correct the lettering of the condition and to remove the language that discusses the NO_x and CO limitations. Such language is removed because the source discussed that their interpretation of this language was that the source would not have to stack test for formaldehyde. While OAM agrees that by limiting NO_x and CO, the formaldehyde emissions will be below the toxics threshold. However,

the emission factor presented in the revised USEPA AP-42 Emission Factors for formaldehyde varies based on the type of turbine used. Therefore, the OAM will require testing of formaldehyde. Since this language was not clear to the source, the OAM will remove it from the permit. The condition is revised as follows (changes are bolded and crossed out for emphasis):

D.1.3 326 IAC 2-4.1-1 (New Source Toxics Control)

The formaldehyde emission rate from each stack shall not exceed 0.000714 lb/mmBtu. This emission rate in combination with the emission limitations specified in Condition D.1.1, shall ensure that the single HAPs emissions do not exceed 10 tons per year and the combination HAPs do not exceed 25 tons per year.

- (a) The formaldehyde potential to emit shall be less than ten (10) tons per twelve (12) consecutive month period, rolled on a monthly basis.
- (b) The manganese potential to emit shall be less than ten (10) tons per twelve (12) consecutive month period, rolled on a monthly basis.
- ~~(bc)~~ The combination of HAPs shall be less than twenty-five (25) tons per twelve (12) consecutive month period, rolled on a monthly basis.

~~Therefore, the requirements of 326 IAC 2-4.1-1 (New Source Toxics Control) do not apply. Since NO_x and CO are the limiting pollutants of this source, the NO_x and CO limits established in the permit are sufficient to demonstrate compliance with the formaldehyde, manganese and the combination of HAPs limits established above.~~

4. Condition D.1.13(d), now re-numbered as D.1.12, Reporting Requirements, is revised as follows to reflect the correct condition that the reporting is required for (changes are bolded and crossed out for emphasis):

- (d) The Permittee shall submit reports of calendar month average sulfur content, heat content, fuel consumption, and sulfur dioxide emission rate in pounds per million Btu upon request based on fuel sampling and analysis data in accordance with procedures specified under 326 IAC 3-3 to document compliance with ~~D.1.14~~ **D.1.5**.

5. Since the source has an EPA approved alternative monitoring method for Subpart GG, the source is required to use fuel oil as a back-up fuel source only. The OAM established a specific fuel oil usage limitation under Condition D.1.1.8. Based on this fuel oil usage limitation, the permit will now include an additional reporting requirement of the fuel oil usage rate and include the appropriate reporting form. This reporting form is shown below. The total number of pages is revised from 27 to 28. Condition D.1.12 is revised as follows (changes are bolded and crossed out for emphasis):

D.1.12 Reporting Requirements

- (a) The Permittee shall submit a quarterly excess emissions report, if applicable, based on the continuous emissions monitor (CEM) data for NO_x and CO, pursuant to 326 IAC 3-5-7. These reports shall be submitted within thirty (30) calendar days following the end of each calendar quarter and in accordance with Section C - General Reporting Requirements of this permit.
- (b) A quarterly summary of the information to document compliance with D.1.1 ~~and~~, D.1.3 ~~and~~ **D.1.8** shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported.

	Fuel Oil Usage (gallons/month)				Fuel Oil Usage for previous month(s) (gallons)				Fuel Oil Usage for twelve month period (gallons)			
Month/ Turbine	5	6	7	8	5	6	7	8	5	6	7	8

	Fuel Oil Usage (gallons/month)				Fuel Oil Usage for previous month(s) (gallons)				Fuel Oil Usage for twelve month period (gallons)			
Month/ Turbine	9	10	11	12	9	10	11	12	9	10	11	12

	Fuel Oil Usage (gallons/month)				Fuel Oil Usage for previous month(s) (gallons)				Fuel Oil Usage for twelve month period (gallons)			
Month/ Turbine	13	14	15	16	13	14	15	16	13	14	15	16

- 9 No deviation occurred in this quarter.
- 9 Deviation/s occurred in this quarter.
Deviation has been reported on: _____

Submitted by: _____
Title / Position: _____
Signature: _____
Date: _____

Phone: _____

6. Condition C.1, PSD Minor Source Status, is revised to add-in that PM₁₀ must be maintained below the 250 ton per year threshold. The revision is as follows (changes are bolded and crossed out for emphasis):

C.1 PSD Minor Source Status [326 IAC 2-2] [40 CFR 52.21]

- (a) The potential to emit of nitrogen oxides (NOx), carbon monoxide (CO), Particulate Matter (PM), **Particulate Matter less than 10 microns (PM₁₀)**, Sulfur Dioxide (SO₂) and Volatile Organic Compounds (VOC) for the facilities listed in this construction permit, are greater than 250 tons per year. The potential to emit, of the above listed pollutants, is limited to less than 250 tons per year, therefore the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration) and 40 CFR 52.21 do not apply.
- (b) Any change or modification which may increase potential to emit to 250 tons per year from this source, shall cause this source to be considered a major source under PSD, 326 IAC 2-2 and 40 CFR 52.21, and shall require approval from IDEM, OAM prior to making the change.

On August 16, 2000, Mr. Kevin Jackson submitted comments on the proposed construction permit. In addition, Mr. Jackson spoke at the public hearing held on November 16, 2000. The summary of the comments and corresponding responses is as follows (changes are bolded and crossed out for emphasis):

Comment 1: According to the calculations included in the application, the limited potential to emit of CO, when burning natural gas, is 249.29 ton per year. With all 8 proposed generators in operation, this amounts to a yearly usage of 426 hours for the worst case scenario. These 426 hours of maximum usage is only 17.75 days per year of continual operation. This number is substantially different than the figures used by DPL in an earlier meeting with the public. At this meeting DPL claimed the units would run approximately 10% of the year with the generators being operated 25% of the year. This amounts to 36.5 days total run time with 91 working days. What is correct?

Response 1: The OAM did not attend any preliminary meetings for this permit. Therefore, the OAM cannot determine how the hours of operation presented in your comments were determined. However, the hours of operation of this operation can vary, depending on the load of the turbine, outside temperature and heat input capacity of the turbine. With a lower load, the NOx emissions tend to decrease where as the carbon monoxide (CO) emissions increase. The temperature also effects emission trends of these turbines. A higher temperature can lead to higher nitrogen oxides (NOx) and CO emissions of these units. So the hours of operation presented to the community could have been based on typical loads and lower temperatures. This would yield lower emissions and therefore allow for higher hours of operation. When calculating the potential to emit, the emissions are based on worst case operating conditions which is generally much higher than typical operations. At the highest projected hourly emission rate for CO, the units would be expected to operate fewer hours. Under normal operating conditions, the units will emit far less CO on an hourly basis than the worst-case projection and as a result, will operate more than 426 hours per unit per year, if required by the regional transmission system. For example, a single unit has worst-case emissions of 73.15 lb of CO per hour. If the 16 units have a less than 250 ton per year limit, each unit could be expected to annually operate an average of 426 hours. However, at more optimal operating conditions, if the single unit emission rate is 55.03 lb of CO per hour, each unit could be expected to annually operate an average of 568 hours.

Another to note is that this permit is based on emissions' limitations and not hours of operation. The hours of operation can fluctuate above or below the values estimated in the technical support document based on the variables listed above. The permit has limited the NOx and CO emissions to less than 250 tons per year. This will inherently restrict the hours of operation, but the hours of operation could be higher than what is presented in the technical support document based on operating at lower loads, etc and not operating at worst case conditions. To ensure compliance with the established emissions' limitations, the source will have to continually monitor the emissions with a continuous emissions monitoring system (CEMS). This monitor reads out emissions every fifteen (15) minutes. This system will be tested, to ensure proper installation and operation, by the IDEM. Once in operation, this system will record all data from the turbines and the source is required to maintain this data and submit it to the IDEM on a quarterly basis. Once the data is submitted to IDEM, it becomes public information where anyone concerned or interested could either visit IDEM and check the information out from the file room (located on the 12th floor of the Indiana Government Center - North) or call in and request copies of the data be sent to their home address (there is a copy surcharge associated with this method).

Comment 2: I still struggle with the fact that these generating stations cost as much as they do with only being able to run for a short period of time. The project was quoted by DPL to cost \$160 million dollars for the 8 generators. How can the electric industry justify this type of expense with the limited time to recap this expense.

Response 2: The Office of Air Management (OAM) has no regulatory authority in regards to the source's expense and profits. However, the permit does require continuous monitoring of emissions to ensure that such emissions do not exceed the permitted limits established. Any change or modification which may increase potential to emit to 250 tons per year from this source, shall cause this source to be considered a major source under PSD, 326 IAC 2-2 and 40 CFR 52.21, and shall require approval from IDEM, OAM prior to making the change.

Comment 3: Where did the figures used in the amount of pollutants come from? Are these actual tonnage figures from history or are they calculated? Understand that these numbers have been provided by the manufacturer of the generators. Has there been any follow-up by IDEM or EPA to see that these are correct? How does the public know that these calculations are correct?

Response 3: For the purposes of the application, industry provides information from a variety of sources. In this instance, the source provided information from the manufacturer of the units for nitrogen oxide (NOx), carbon monoxide (CO), volatile organic compounds (VOC), sulfur dioxide (SO₂), and particulate emissions. Additional emission information was based on USEPA's emission factors for stationary combustion turbines. The manufacturer's data is based on similar units that have been in operation and tested. In addition, the permit requires testing of the units for CO and NOx when the units are initially installed. The permit also requires the source to install a continuous emissions monitoring system for CO and NOx, to ensure that such emissions do not exceed the limited threshold.

This permit is based on the worst case operating scenario and operation at 8,760 hours per year which yields the potential to emit, and not actual emissions. The source's actual emissions should be far less than the potential to emit values listed in the technical support document.

Comment 4: A big concern about this generating station is how it will be monitored by IDEM. Who is responsible for air samples pulled and how often will they be monitored? There is nothing in the application that outlines this. Is DPL going to do all the monitoring or is it

IDEM. Is the air quality going to be checked on a monthly or quality basis? If DPL does the monitoring what are the guidelines to ensure that it is done correctly?

Response 4: The permit requires that a continuous emissions monitoring system be installed. This system will record the amount of nitrogen oxides (NOx) and carbon monoxide (CO) emitted on a continuous basis. This data will be used for compliance, to ensure the ton per year limits are not exceeded. The source will be responsible for the submittal of a monitoring plan for NOx and CO. This monitoring plan must be approved by IDEM. The monitoring equipment must be installed, certified and operated in accordance with state and federal requirements. Such requirements are listed under 326 IAC 3-5 (Continuous Monitoring of Emissions). IDEM will be notified by the source prior to any required testing and will have the opportunity to witness all such testing to ensure it is conducted in accordance with all requirements. The source is also required to submit the recorded emissions data on a quarterly basis. Condition D.1.9 outlines the requirements of compliance determination for the continuous emissions monitoring system.

Comment 5: What are the repercussions to DPL if they emit more pollutants than allowed? What will be done by IDEM if this happens? Is there a monetary fine or threat of shutdown if this happens? Will there ever be a case where a violation by DPL results in a fine but yet it will be cheaper for them to pay the fine and continue operating? Are the penalties severe enough to prevent multiple violations?

Response 5: If the source exceeds the established permit limits, then the source can face penalties up to \$25, 000 per day per violation. The source is required to submit a malfunction emission rate reduction program within one-hundred eighty (180) days after the commencement of operation. This program will include the normal operating emission rate and the program proposed to reduce emissions in the event of a malfunction to an emission rate that will not contribute to the cause of the violation of the ambient air quality standards established in 326 IAC 1-3. If a malfunction of any facility or emission control equipment occurs and lasts more than one (1) hour, said condition shall be reported to OAM. Notification shall be made by telephone or facsimile, as soon as practicable, but in no event later than four (4) daytime business hours after the beginning of said occurrence. If the source continues to knowingly violate the permit limitations, then the source could face criminal penalties. These penalties vary in cost and could lead to possible incarceration time.

Comment 6: My beliefs are that these generating stations will be operated remotely with little human input required. What are the steps in place to insure that no catastrophes will happen when it is not manned? I not only worry about the impact of an environmental disaster but the safety of my family since we live so close.

Response 6: The source is required to construct the facility in accordance with all federal, state and local building requirements and safety standards. A staff of Dayton Power and Light will be employed at the site, and conditions at the plant will be monitored remotely, 24 hours a day. As stated above, the source is required to establish a malfunction emission rate reduction program. If a malfunction occurs that results in a violation of the permit limitations, the source is responsible for notifying IDEM as soon as possible but no later than four (4) business hours. The Office of Air Management (OAM) routinely performs air quality analyses to insure that issuance of a permit will not result in a violation of any state or federal air regulations and standards. A permit would be denied if the application does not meet the requirement of 326 IAC 2 or if the source would pose a threat to public health. In addition, the air quality analyses conducted demonstrates that air quality in the vicinity of the plant will continue to comply with the air quality standards. No significant impact on public health or welfare are expected to occur as a result of the emissions from the proposed facility.

Comment 7: There is nothing in the permit about water quality. Am I supposed to assume that this has been addressed by IDEM. Will all the water used be dispersed through the smoke stacks? How are they going to hold and store the ash-by-product of combustion? What are the effects on well water levels and quality?

Response 7: Based on this type of operation, a waste water treatment permit is not necessary. There is not a waste water stream coming from this operation. OAM believes water quality will not be adversely affected by the emissions from the facilities. The source may be required to obtain a storm water permit under 327 IAC 15 if applicable to the facility.

The water that is used is injected into the combustion part of the turbine and then evaporates. Water injection is a type of NOx control process.

There is no ash by-product from this operation.

Domestic well owners are protected against the impacts of high capacity pumpage in accordance with Indiana Code 14-25-4, the Water Rights: Emergency Regulation statute. The Indiana Department of Natural Resources (DNR) helps address concerns about water rights and is aware of concerns that have been raised pertaining to merchant power plants. Mr. Mark Basch, with the Division of Water at the Department of Natural Resources, is available toll free at 877/928-3755 to help answer questions.

Comment 8: In the future, will this type of generating station be allowed to become more than a Minor Source Pollution source?

Response 8: Any change or modification which may increase potential to emit to 250 tons per year from this source, shall cause this source to be considered a major source under PSD, 326 IAC 2-2 and 40 CFR 52.21, and shall require approval from IDEM, OAM prior to making the change.

Comment 9: I have read articles about the air permits being withdrawn for the CinEnergy plant at Cadiz, the Duke plant at Muncie and the LSP-Columbus plant. Were these plants withdrawn due to public outrage or environmental issues?

Comment 9: The above mentioned air permits have not been withdrawn from the OAM. The New Construction and Minor Source Operating Permit for CinCap VII, LLC was issued on July 15, 1999. The DeSoto Electric Generating Station and LSP Power air permits are currently under review.

On August 16, 2000, Mr. Stephen A. Loeschner submitted comments on the proposed construction and operating permit. In addition, Mr. Loeschner spoke at the public hearing held November 16, 2000. The summary of the comments and corresponding responses is as follows (changes are bolded and crossed out for emphasis):

Comment 1: Permit 12321 is 1 of the 28 listed categories of 42 USC 7479(1) and 40 CFR 52.21(b)(1)(in)(a), to wit: "Fossil fuel-fired steam electric plants of more than 250 million British thermal units per hour heat input." Rationale for that was sent in a 31 March 2000 letter ("March letter") via certified mail to USEPA Regional Administrator Francis Lyons and IDEM Air Permitting Chief Paul Dubenetzky, and it is incorporated herein by reference. The simple cycle combustion turbine ("SCCT") industry does not generally advertise the fact that steam produced from liquid water is substantially part of the electrical energy production process. A quotation from 3 February 2000 ABB Alstom Power press release (that was attached to comment by COW and I dated 22 April 2000 in regards to MSOP 11528 and is hereby incorporated herein by reference) is candid, "The GT11N2 is particularly suited for peaking power applications since it allows high

water injection rates, thus boosting power output.” The water mass to fuel mass ratio of the make and model is presumed to be similar to the Pratt and Whitney equipment specified for 12321. It is the duty of the 12321 applicant and IDEM to make case in law that the applicant is not in that category or that IDEM shall apply the 100 tons per year threshold, cancel this permit, and entertain the submission of a full PSD application. History and statements like “IDEM has not required an SCCT group to be encompassed by the 40 CFR 52.21 PSD program at less than 250 ton per year” is insufficient response in light of the more water than fuel mass operation of 12321. The “Source Status(a)” findings within the TSD, has no basis of USC law or CFR regulation applicable to the PSD program. Thus, permit 12321 should be canceled.

Response 1: In regards to determining whether a simple cycle turbine is a steam generating unit, a simple cycle turbine should be defined. According to USEPA's document number EPA-453/R-93-007 “Alternative Control Techniques Document - NOx Emissions from Stationary Gas Turbines, a simple cycle turbine is defined as an operation that functions with three primary sections, compressor, combustion chamber and turbine fan. First, air is filtered and compressed in a compressor. Compressed air and natural gas/oil are mixed and combusted in the combustion chamber. Exhaust **gas**, not steam, from the combustion chamber is expanded through a turbine which drives both the air compressor and the electric power generator. A simple cycle turbine does not rely on the use of steam to drive the turbine generator, unlike a steam turbine used in a combined cycle process. Simple cycle operation is typically used when there is a requirement for shaft horsepower **without** recovery of the exhaust stream. In a fossil fuel-fired steam electric plant, a furnace or boiler combusts fuel for the sole purpose of generating steam. The steam is directed into the turbine-generator at very high pressures wherein the steam drives the turbine. The steam is condensed back into water by use of a condenser and returns to the boiler.

The turbines proposed will use a water injection system for the control of NOx when burning fuel oil and natural gas. Injecting water into the flame area provides a heat sink that lowers the flame temperature and thereby reduces the formation of thermal NOx. This control technique does not recover steam to increase the output of the turbine. The use of water injection results in a net penalty to the overall efficiency of the turbine.¹

Furthermore, when determining if the applicant is in a category where the 100 tons per year threshold is applicable, IDEM reviewed the Clean Air Act, last amended in 1990 (CAA). This is the best “case in law”. Title I of the CAA contains reference to terms related to the electric utility industry. For example, “fossil fuel fired electric utility units” is used in Section 111 - New Source Performance Standards. Also, “electric utility steam generating units” is used in Section 112 - the National Emission Standards for Hazardous Air Pollutants to correspond to the Title IV terminology. And “fossil fuel fired steam electric plants of more than 250 million British thermal units per hour heat (MMBtu) input” is used in Section 169, the definitions for Prevention of Significant Deterioration. These terms are undefined by statute, but are clearly defined by the implementing rules of Chapter 40 of the Code of Federal Regulation (CFR). In 40 CFR Part 60, Subpart D, the definition of a fossil fuel fired steam electric generating unit “means a furnace or boiler used in the process of burning fossil fuel for the purpose of producing steam by heat transfer.” A simple cycle turbine does not produce steam through heat transfer and should not be considered a fossil fuel fired steam electric generating unit.

Subpart GG in 40 CFR Part 60 defines a simple cycle gas turbine to mean “any stationary gas turbine which does not recover heat from the gas turbine exhaust gases to preheat the inlet combustion air to the gas turbine, or which does not recover heat from the gas turbine exhaust gases to heat water or generate steam”. It is important to

note that the emission standards for NO_x were last revised in 1982. At this that, water injection was the only means of reducing NO_x emissions. As a result, the rules required owners to monitor the water-to-fuel ratio, clearly recognizing the role water injection plays in emissions control.

It is clear from the above definitions that a simple cycle combustion turbine, utilizing water injection or any other NO_x control technology, has never been considered a steam generating unit by federal law.

Further supporting this conclusion is an interpretive rule issued May 26, 2000 by USEPA (attached). In this document USEPA states "the phrase 'steam generating unit' in the term 'electric steam generating unit' is critical to interpretation which types of combustion units are covered by this definition and which types are not. The definition clearly covers a conventional fossil fuel fired steam generating unit which extracts heat from the combustion of fuel and generates steam for use in a steam turbine, which in turn provides shaft power to spin an electric generator and generate electricity."

USEPA goes on to state "however, we do not believe this term intended to cover a stationary combustion turbine which extracts shaft power from the combustion of fuel and spins an electric generator to generate electricity. Such a combustion turbine does not extract heat to generate steam. In fact, there is no steam generated at all in a combustion turbine. Hence we conclude that the term 'electric utility steam generating unit' does not include any stationary combustion turbine...."

In addition, a February 2, 1993 USEPA memo from Edward J. Lillis, Chief of the Permits Branch to Bernard E. Turlinski, Chief of the Air Enforcement Branch of Region 3 (attached), called "Determining PSD Applicability Thresholds for Gas Turbine Based Facilities" states that any gas turbine that is in combined cycle or cogeneration mode with a total heat input capacity of more than 250 MMBtu shall fall under "fossil fuel-fired steam electric plants" and shall be subject to the 100 tons per year emission rate threshold for PSD source applicability. Therefore, simple cycle turbines are not considered within this category, and should be subject to the 250 tons per year threshold.

Comment 2: The 12321 owners may order their operators to operate it such that more than 250 tons per year of CO and or more than 250 tons per year of NO_x will be emitted in violation of permit 12321. A xerographic copy from the microfilm of an article in the 3 December 1999 Fort Wayne Journal Gazette has an attribution of "Kirk Guy, the company's director of development" that "When the plant, which will use 300 gallons a minute from one to four wells 300 feet deep. Guy said." Page 4 of 12321 Technical Support Document ("TSD") indicates that 250 ton per year limit could be exceeded in 427 hours. Guy underestimates to play to the public for the water use which is 350-450 GPM. A possible daily fine of less than 30, 000 will have deterrent effect as set out in the March letter. 12321 is a sham in accordance with pp. 10-16 of Hunt/Seitz 13 June 1989 USEPA guidance. Because IDEM holds delegated authority, it is issuing a non-PSD draft. There is ample reason for IDEM to demand PSD review for 12321.

Response 2: The hours of operation of this operation can vary, depending on the load of the turbine, outside temperature and heat input capacity of the turbine. With a lower load, the NO_x emissions tend to decrease where as the carbon monoxide (CO) emissions increase. The temperature also effects emission trends of these turbines. A higher temperature can lead to higher nitrogen oxides (NO_x) and CO emissions of these units. So the hours of operation presented to the community could have been based on typical loads and lower temperatures. This would yield lower emissions and therefore allow for higher hours of operation. When calculating the potential to emit, the emissions are based on worst case operating conditions which is generally much higher than typical operations.

At the highest projected hourly emission rate for CO, the units would be expected to operate fewer hours. Under normal operating conditions, the units will emit far less CO on an hourly basis than the worst-case projection and as a result, will operate more than 426 hours per unit per year, if required by the regional transmission system. For example, a single unit has worst-case emissions of 73.15 lb of CO per hour. If the 16 units have a less than 250 ton per year limit, each unit could be expected to annually operate an average of 426 hours. However, at more optimal operating conditions, if the single unit emission rate is 55.03 lb of CO per hour, each unit could be expected to annually operate an average of 568 hours.

Another to note is that this permit is based on emissions' limitations and not hours of operation. The hours of operation can fluctuate above or below the values estimated in the technical support document based on the variables listed above. The permit has limited the NOx and CO emissions to less than 250 tons per year. This will inherently restrict the hours of operation, but the hours of operation could be higher than what is presented in the technical support document based on operating at lower loads, etc and not operating at worst case conditions. To ensure compliance with the established emissions' limitations, the source will have to continually monitor the emissions with a continuous emissions monitoring system (CEMS). This monitor reads out emissions every fifteen (15) minutes. This system will be tested, to ensure proper installation and operation, by the IDEM. Once in operation, this system will record all data from the turbines and the source is required to maintain this data and submit it to the IDEM on a quarterly basis. Once the data is submitted to IDEM, it becomes public information where anyone concerned or interested could either visit IDEM and check the information out from the file room (located on the 12th floor of the Indian Government Center - North) or call in and request copies of the data be sent to their home address (there is a copy surcharge associated with this method).

In regards to the June 13, 1989 USEPA memo, "Limiting Potential to Emit in New Source Permitting" to John Seitz of the office of Air Quality Planning and Standards addresses circumvention of PSD issues related to turbines in the following example:

"An existing major stationary sources proposes to add a 12.5 megawatt electric utility steam generating unit, and applies for a federally enforceable minor source permit which restricts operation at the unit to 240 hours per year. Because the project is designed as a **baseload** facility, EPA does not believe that the source intends to operate the facility for only 240 hours per year."

Simple cycle turbines are designed to operate for short periods of time during "peak power demand". Baseload facilities, such as combined cycle and cogeneration projects, run for extended periods of time all year round. Based on discussions with vendors such as General Electric and Westinghouse, the operation of a simple cycle facility as a baseload facility would not be economically feasible. This source is listed in the draft permit as operating in simple cycle mode. Any change in the operation from what is permitted, would required prior OAM approval.

Comment 3: 12321 C.7 is a sham as no continuous opacity monitors are required, that the intent is to operate the plant for far more than the majority of the time with no personnel present, and thus, absent qualified observers, there will be no "readings". Thus opacity is not federally enforceable as there is no method whatsoever to demonstrate continuous compliance. As C.7 is written, what is the minimum required observation frequency?

Response 3: Pursuant to 326 IAC 5-1-2 (Opacity Limitations), the opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 **or** fifteen (15)

one (1) minute nonoverlapping integrated averages for a continuous opacity monitor in a six (6) hour period.

As listed in the above paragraph, compliance with the opacity limitations is demonstrated by Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor in a six (6) hour period. The source is not required to use only a continuous opacity monitor based on the 326 IAC 5-1-2. This rule does state that Method 9 can be used to demonstrate compliance. This method involves a visual determination by a qualified observer (40 CFR Part 60, App. A, Method 9). Listing Method 9 or a continuous opacity monitor in Section C.7 as the two (2) methods to determine compliance with such condition, is sufficient to make such condition federally enforceable.

Comment 4: The public is reasonably entitled to prompt data of plant operation. Therefore conditions should be added, perhaps as an additional 12321 C.18 point or substituted for C.21, that within the first 15 days of a month, the total CO and NOx emitted, total turbine operating hours, total fuel LHV BTU's, and the total megawatts of electricity produced by the plant be reported. If, for example, a total of 243 tons of CO are emitted in July and August 2002, the public is entitled to know by mid-September 2002 that the plant should be essentially non-operative through June 2003. To delay the availability of this data to 1 October 2002 is callous and ineffectual.

Response 4: To affirm that the source has met all the compliance monitoring requirements stated in this permit the source shall submit a Quarterly Compliance Monitoring Report. Any deviation from the requirements and the date(s) of each deviation must be reported to IDEM. Currently, there are no provisions that would require the source to submit any earlier than what is stated in the permit. The source must maintain records of the amount of natural gas combusted (in MCF), fuel oil (in gallons) per unit (turbine, heating equipment and fire pump engine) during each month, the percent sulfur content of the natural gas (if other than pipeline quality natural gas which is defined as natural gas that is provided by a supplier through a pipeline; 40 CFR Part 72.2), fuel oil of each unit (turbine and fire pump engine), the emission rates of NOx and CO in pounds per hour (based on CEMS data) and the Permittee shall maintain records required under 326 IAC 3-5-6 at the source in a manner so that they may be inspected by the IDEM, OAM, or the USEPA., if so requested or required. In addition, the source shall maintain records of the natural gas analyses, including the sulfur and nitrogen content of the gas, for a period of three (3) years. The hours of operation are not limited, therefore it is not necessary to report or record such. The permit limits the emissions and the information listed above is sufficient to further show compliance with the standards listed in the permit.

Comment 5: There is confusion in 12321 C.21(a) and (d) in required certification by "authorized individual". Reports of emissions should always be so certified.

Response 5: Listing that the reporting forms should be certified by an "authorized individual" in Section C.21 is to further emphasize such. Reporting forms should be certified by an authorized individual.

Comment 6: 12321 introductory text "fuel oil sulfur content does not exceed 0.5 pounds per million Btu" is erroneous and or lawfully without merit. It should be restate to parallel and protect the D.1.1(c) text. Further, oil that is 0.005% or less sulfur is readily available and that is the quality that should be required.

Response 6: 326 IAC 7-1.1-2 (Sulfur Dioxide Emission Limitations)(a)(3) states the limit of distillate fuel oil as 0.5 pound per million Btu. Based on vendor information, oil with a sulfur content of 0.005% is not readily available. The permit requires the sulfur content to be

limited to 0.05%, which is available.

Comment 7: 40 CFR 60.332, as replicated in part in 12321 D.1.2(b)(1), is hopelessly confusing. Whereas 3.6 kilojoules per watt-hour is generally accepted as exact, the phrase "14.4 kilojoules per watt hour" has no intuitive support. It is reasonably IDEM's duty to present a clear sample calculation in the TSD that represent the worst case allowable NOx emission for oil and gas that is expressed as "ppmvd @ 15 percent O2", the current industry parlance.

Response 7: The language listed in Condition D.1.2(b)(1) and above is based on 40 CFR 60.332. Based on the maximum net heat rate (95 degree day combusting fuel oil), the kilojoules per watt-hour is 10.5. Therefore, $STD = 0.0075(14.4/10.5) + 0.04(0.03) = 0.0115$ percent by volume at 15 percent oxygen on a dry basis.

Comment 8: 12321 D.1.9(b)(ii) appears very inconsistent. 2.9 million gallons of oil having an approximate density of 7.5 pounds per gallon having 0.05% sulfur content can only produce 11 tons of SO₂ if combusted. Wherein does the 116.0 come from? Why was the custom schedule not included in the package as it would be source specific?

Response 8: Condition D.1.9(b) was corrected under the OAM changes' section, listed as #1. The potential to emit from the limited fuel oil usage rate is equivalent to 11.76 tons of SO₂ per year and 37.6 tons of NOx per year. The 116.0 tons of SO₂ per year was a typographical error.

The custom schedule (attached to this document) listed in Condition D.1.9(b) was developed by the USEPA in a letter dated March 24, 2000 to Ms Amy Wright from Mr. George T. Czneriak, Chief of Air Enforcement and Compliance Assurance Branch. On February 21, 2000, Dayton Power and Light applied for a custom schedule for the Montpelier Electric Generating Station. This letter and a copy of the March 24, 2000 approval letter are also available in a public file at IDEM - OAM, 10th floor for the Montpelier Electric Generating Station and can be made available by a written or verbal request.

Comment 9: What was the public notice and appeal process prior to the issuance of that document?

Response 9: Based on 40 CFR Part 60, Subpart GG, the Administrator must approve such custom schedule. This approval process listed in 60.334(b)(2), does not require public notice or allow for an appeal process.

Comment 10: Quarterly reports a month late are totally inappropriate for 12321 D.1.13. Monthly reports, not more than 15 calendar days aged, are appropriate and electrical megawatts are needed such that the total efficiency of the system is recorded.

Response 10: To affirm that the source has met all the compliance monitoring requirements stated in this permit the source shall submit a Quarterly Compliance Monitoring Report. Any deviation from the requirements and the date(s) of each deviation must be reported to IDEM. Currently, there are no provisions that would require the source to submit the information required under Condition D.1.13 earlier than what is stated in the permit.

Comment 11: Both manganese (Mn) and formaldehyde (CH₂O) are mentioned as being limited to less than 10 tons per year by 12321 D.1.3. Both have a potential to emit in excess of 10 tons per year per Appendix A and the potential to emit table within the TSD. However, there is no limit of operating time.

Response 11: The permit limits emissions not the hours of operation. The source is required to stack

test for formaldehyde because the emission factor varies based on the model for this type of operation. However, testing is not required for manganese because the new USEPA emission factors for combustion turbine ranked the factor at an "A" level, which is the highest value to assign an emission factor. Since NOx and CO are the limiting pollutants of this source, the NOx and CO limits established in the permit are sufficient to demonstrate compliance with the formaldehyde, manganese and the combination of HAPs limits established above. The source is required to use a continuous emission monitoring system to demonstrate compliance with the NOx and CO limits, and preform a stack test for formaldehyde (CH₂O) to verify the emission rate specified in D.1.3..

Comment 12: For 12321 TSD State Rule Applicability, 326 IAC 2-2(d), provide basis in law for "stopping the clock" and allowing a source to later enter a PSD with "BACT at this time" rather than BACT at the time of PSD application. Contrast that with "required to meet the most current BACT...." at the end of the paragraph. Also either furnish a complete BACT analysis or delete the "recently been permitted BACT value set at 9 ppmvd @ 15% O₂" reference.

Response 12: The technical support document states that if the Permittee ever elects to relax the potential to emit limitation such that the PSD rules apply, the Permittee would be required, at a minimum, to install a control which would meet the value considered BACT at that time or install add-on controls which would meet the current BACT value. For example, the Permittee is installing turbines that have been guaranteed by the vendor to meet a NOx emission rate of 25 ppm, but permits for similar units have recently been permitted with BACT value set at 9 ppm. Therefore, at a minimum, the Permittee would be required to meet the most current BACT value for similar sources, at the time of the PSD approval, as determined on a case by case basis. This statement, in the technical support document, is an example and merely states that if the source ever elects to go through a PSD review, the source would be required to satisfy the requirements of current BACT. This statement is not federally enforceable. The original technical support document does not change from the preliminary findings in order to maintain the integrity of the review process. The technical support document is utilized as a technical tool that allows the source and the public to understand OAM's decision in a more detailed manner. This document is not an enforceable document, but an aid to the source's permit.

On November 16, 2000, a public hearing was held for the Montpelier Electric Generating Station's new source construction and operating permit. There were several comments made during the public hearing. However, only comments or questions that are pertinent to this construction and operating permit and/or about air permitting in general will be addressed. The following is a summary of relevant air issues.

The following comments were presented by **Mr. Stephen Loeschner**:

Comment 1: Based upon the information that was available in the library, the application indicates that this plant will use more water on a pound-for-pound basis than it does fuel. There is in federal law and federal regulations a provision that defines whether or not a plant will be strictly regulated in accordance with federal law or whether it will have rather loose regulations. And that hinges on whether or not it is a, quote, steam electric generating unit, unquote. Now, unfortunately, Congress did not define what that is, and the USEPA hasn't done much with it either as far as writing in the Code of Federal Regulations. But there is a fellow in an obscure place. I believe it's called Research Triangle Park. His first name is Sims, and his last name is Roy. And he very cleverly wrote that combustion turbines of the type that DPL wishes to build or purchase and install are not steam electric generating units. He says that the water that goes in there does not contribute to the energy. That is flat out incorrect. It is a substantial amount of energy from the water expanding, pushing against the turbines that makes the power. The

bottom line of this is if it is interpreted in accordance with federal law, it would be at 100 tons per year; in accordance with the state law, 250. And, of course, this thing wants to emit at approximately 249. The Indiana Attorney General defends the Indiana Department of Environmental Management from time to time, and Commissioner Lori Kaplan asks the people from time to time what kind of a job the agency is doing in protecting the people. And there is a considerable amount of discretion here. And I would call upon the agency in the form of Mr. Dubenetzky and his superiors to call the bluff of DPL and to say this is a steam electric generating unit on the basis of more water than fuel and define it as such and simply remand this permit and write it over again in accordance with the federal prevention of significant deterioration regulations where it would then be subject to a reasonable appeal.

Response 1: On August 16, 2000, Mr. Stephen Loeschner submitted comments on the proposed construction and operating permit. This specific question has already been addressed by Mr. Loeschner in his written comments. The OAM's response to this question can be located under Response #1 of Mr. Stephen Loeschner's section of this addendum.

The following comments were presented by **Mr. Kevin Jackson**:

Comment 1: Who do we believe in all this and what are going to be the long term affects? How do we know that the thing is going to be safe?

Response 1: The air quality analyses conducted demonstrates that air quality in the vicinity of the plant will continue to comply with the National Ambient Air Quality Standards (NAAQS). The OAM utilizes a computer model, which is approved by the USEPA, to predict what impact the emissions from the plant will have on the air the community breathe and compares them to the standards that are established to protect human health. Based on the air quality analysis, no significant impact on public health or welfare are expected to occur as a result of the emissions from the proposed facility. In addition, this plant's emissions for NO_x, SO₂ and CO will be continuously monitored. The records of the emissions will be required to be maintained and submitted to the OAM on a quarterly basis and available to the public.

Comment 2: Is there anything in the permit about particle sizes? Is this something that OAM will look into and regulate? If the particulate size is small enough, it can cause a problem such a carcinogen or anything like that.

Response 2: Natural gas produces very small amounts of PM and PM₁₀. Particulate Matter emissions from turbines primarily result from carryover of noncombustible trace constituents in the fuel. PM₁₀ and PM emissions are limited to less than 250 tons per year. By limiting NO_x and CO emissions to less than 250 tons per year, the other criteria pollutants, such as PM and PM₁₀, will also be less than 250 tons per year. The limited potential to emit of PM₁₀ is equal to 6.97 tons per year. Based on the air quality analysis, the emissions produced will not have a significant impact on human health.

In regards to PM_{2.5}, EPA issued a new National Ambient Air Quality Standards for Particulate Matter less than 2.5 microns (PM_{2.5}) on July 17, 1997. Due to a legal challenge to the new standard, however U.S. EPA has released specific guidance stating that states should continue to analyze PM₁₀ impacts for all New Source Review. There are 3 primary origins of PM_{2.5}: 1) primary particulate in the solid state, 2) condensable particulate and 3) secondary particulate formed through atmospheric reactions of gaseous precursor emissions. There will be a five-year scientific review of this standard which includes installation of PM_{2.5} monitors throughout the state to better define background concentrations and gather source specific information. EPA is expected to release a new dispersion model to better predict PM_{2.5} concentrations.

There are no assumed ratio of $PM_{2.5}$ to PM_{10} at this time. As more information becomes available, a more detailed analysis of $PM_{2.5}$ can be conducted.

Based on the air quality analysis, no significant impact on public health or welfare are expected to occur as a result of the PM and PM_{10} emissions from the proposed facility.

Comment 3: Another further question I have now, the numbers that are used in the permit, or the 250 ton, where do those numbers come from and have they been proven, tested?

Response 3: August 16, 2000, Mr. Kevin Jackson submitted comments on the proposed construction and operating permit. This specific question has already been addressed by Mr. Jackson in his written comments. The OAM's response to this question can be located under Response #3 of Mr. Kevin Jackson's section of this addendum.

The following comments were presented by **Mrs. Donna Runkle**:

Comment 1: Pike County already produces its share of electricity. IPL and Hoosier Energy had higher incidents of cancer and respiratory problems. Health insurance rates have been increased to reflect this. Tenaska has offered Pike County's local leadership tax revenue and promises of jobs. The president of the county council led the way for Tenaska offering his property. His brother, hired by Tenaska, offered 5,000 to 38,000 dollars for nearby neighbors' signatures not to oppose the Tenaska project and for property easements. The county council members, some who entered the room were wearing Tenaska hats, approved a \$35-million abatement for Tenaska. Now that the Tenaska project has doubled in size, so will the abatement. Tenaska has not promised that it will hire one employee from Pike County. The few jobs Tenaska will bring are not worth the devastation that will occur. 150 acres of fertile farmland, quite possibly more, will be taken out of production. The proposed site is not an environmentally depressed area, but a beautiful, peaceful country setting surrounded by family homes and farms. A few selfish individuals are set to make huge profits from this project at the expense of a small community's way of life. Pike County has much more to offer than an underground gas line and transmission towers. We love our homes and our way of life. Do not allow big business to take it away from us. Then it's been sworn in and documented.

Response 1: Air pollution control rules do not regulate plant location decisions. It is the OAM's understanding that the facility is acceptable under local zoning requirements. Local governments have jurisdiction on zoning issues. Currently, this air permit application is under review. If anyone has specific air permit questions in regards to the Tenaska project, please contact Mr. David Howard at 317-232-8422.

Comment 2: I have two of many issues surrounding merchant power plants. Those issues are Indiana's water and land resources, and the message to you today is about natural resource management. Water and land used for these merchant plants have been the driving force that has kept me involved at the local and state levels for the past 15 months. Merchant power plants represent one of the largest water consumers, or in many cases, the largest consumer in our state. The water consumption of LS Power plant in Columbus of 8 to 12 million gallons per day raised concerns that the PPIC made in the local newspaper. Those questions caused Columbus city water utilities to obtain equipment hydroplaning in Ellettsville to form a hydroelectric study of the L & S plant's water consumption versus the short- and long-term needs for water for the city of Columbus well fields even though the LS Power officials have assured us that they felt confident there was plenty of water to support the LS Power project and future city water needs. The Whitman study concluded a careful resource management of the water resources was critical. A study also found that 10 to 15 years out, the LS Power plant's water consumption would not allow the city of Columbus to have enough water to support future city growth or water requirements.

Indiana needs a comprehensive water management policy to ensure these merchant plants do not hurt our current residential, industrial, and agricultural water resources at risk of depletion.

The PPIC and other citizens groups of Indiana involved with merchant plant issues strongly urge legislation action that requires every merchant plant developer to pay a fee to the State to finance an independent hydrological study like the Columbus study of the merchant power plant's water consumption from surrounding residential, commercial, and agricultural wells and water resources. No one currently having a well or water supply resource -- supply should have that supply sacrificed for an investor who owns merchant power plants.

Response 2: Air pollution control rules do not regulate water usage issues. Currently, this air permit application is under review. If anyone has specific air permit questions in regards to this source, please contact Mr. David Howard at 317-232-8422.

In regards to water usage, domestic well owners are protected against the impacts of high capacity pumpage in accordance with Indiana Code 14-25-4, the Water Rights: Emergency Regulation statute. The Indiana Department of Natural Resources (DNR) helps address concerns about water rights and is aware of concerns that have been raised pertaining to merchant power plants. Mr. Mark Basch, with the Division of Water at the Department of Natural Resources, is available toll free at 877/928-3755 to help answer questions.

Comment 3: The citizens of Columbus have already proved that the power plant has emitted more chemicals than what it proposed to be. The citizens in Columbus got the power plant stopped there because they did an independent study on their own to show that the emissions were wrong. We've currently got studies that different people are working on and paying for to see if all those toxic chemicals that come out of there are really toxic or even if they're from fossil fuels because we think they may be -- with the single-cycle turbine, they could burn anything. And we think they may be even trying to burn hazardous waste. But that is just a study. That's not known.

Response 3: Currently, the LS Power air permit application is under review. Preliminary findings have not been made by IDEM, OAM at this time. If anyone has specific air permit questions in regards to this source, please contact Mr. David Howard at 317-232-8422.

The type and emissions rate (in pounds per mmBtu) of hazardous air pollutants for stationary gas turbines are based on AP-42 USEPA emission factors for stationary gas turbines. This final document was based on data from a number of sources within the Office of Air Quality Planning Standards) OAQPS and from outside organizations. Emission test reports from various natural gas-fired and oil-fired combustion turbines, were compiled by the Emission Factor Inventory Group. The Combustion Turbine Workgroup of the former EPA Industrial Combustion Coordinated Rule making (ICCR) submitted test reports for combustion turbines burning various fuels. Test reports were also gathered from the state of Wisconsin and the state of California. Section 3.1 of the AP-42 has been updated to incorporate this new available data. New information has been used to better characterize this source category and to develop improved criteria pollutant emission factors. The background report for the revised Section 3.1 can be located at www.epa.gov/ttn/chief.

For this source, natural gas will emit formaldehyde at the highest rate. When burning fuel oil, manganese will be emitted at the highest rate. Based on limiting NOx and CO to less than 250 tons per year, the formaldehyde and manganese emissions will be limited to less than 10 tons per year. DPL is required by D.1.7(c), in the permit, to preform emission testing to confirm formaldehyde emission rates. Therefore, 326 IAC 2-4.1

(Major Sources of Hazardous Air Pollutants - New Source Toxics Control) does not apply to this source. There are no other specific rules that govern formaldehyde and manganese.

Based on the application and the draft permit, this source will be permitted to burn natural gas as the primary fuel and burn fuel oil as a back-up only. Any changes in fuel will require prior approval by the OAM.

Comment 4: The second resource these plants involve is land. In 1997, Indiana undertook to develop a farmland and open space preservation policy. Not unlike the other merchant plants, the LS Power plant was to be built in the middle of a cornfield. Locating these plants in those areas is a direct conflict with the intent of the farmland preservation policy and many local, city, and county comprehensive plans. Does all the time, money, and work that was spent creating these land use policies mean anything or were these policies just conceived to make us feel good? As I see open space and farmland consumed by development since the preservation policy was completed, I wonder if we are using it at all. The farmland preservation policy and local comprehensive plans are the very tools we need to fight these merchant power plants before they become ground fields, industrial parks, and alongside coal-fired plants. Yet under current law, electric utilities can ignore these important policies and plans when to prepare or build new power plants.

Response 4: The regulation of land use is a local a local decision. It is the OAM's understanding that the facility is acceptable under local zoning requirements. Local governments have jurisdiction on zoning issues.

Comment 5: According to the current figures, there are five merchant plants operating and two under construction in Indiana at this time. And incidentally, we're one of the two. If seven of these plants were producing power for Indiana, they would fill our state's power need until 2005 or 2006. Why the rush to build more now? Do we turn Indiana into an export state for electricity at the expense of our water and land sources? The answer to that question depends on the natural resource management action you recommend in the 2001 general assembly. I believe that Indiana clearly needs a comprehensive power plant siting law to guarantee that all of the affected public interests are carefully observed.

Response 5: The Indiana Utility Regulatory Commission (IURC) is the state agency with jurisdiction over these issues. State law would need to be amended to change the authority of the IURC or other state agency.

Comment 6: I understand that the only reason this merchant power plant is not a done deal now is because it was ruled that Dayton Power & Light had illegally not posted the construction permit in the library. Some of the same rude people even questioned if the library really did have a right to know or maybe they did say a need to know what was in the permit. We were told that now a construction permit was on display at the library. The next day I went to the Southern Wells Library, and it was not there. The librarian was very nice and called the Bluffton library to see if it was there. She told me it was at Bluffton and I could see it there. Why wasn't a southern Wells project of this importance to Wells County people in the Southern Wells Library? I went to the Bluffton library the next day and asked if they had a copy on display. And I think this is all legal. That when you walk into a place, and they say it's on display, I assumed it would be somewhere on display. I had to ask, and they had to dig it out from under the shelf. And I know that's legal, but is it fair? I made a copy to take home and study. It was 63 pages.

Response 6: Based on IC 13-15-8-2, not more than ten (10) working days after submitting an

application for a permit issued under IC 13-15-1, the person that submitted the application for the permit shall make a reasonable effort to provide notice:

1. to all adjoining land owners of the land that is the subject of the permit application; or
2. to all occupants of the land that adjoins the land that is the subject of the permit application.

Such notice shall be in writing, include the date on which the application for the permit was submitted to the OAM and include a brief description of the subject of the application.

As required by 326 IAC 2-1.1-6(c) [General provisions: public notice] within ten (10) days of the submission of an application, **each applicant** shall place a copy of the permit application or operating permit revision application for public review at a library in the county where the construction or modification is proposed. **Each applicant** shall notify the commissioner of the location of the library where the copy of the application was placed. There are forms in the permit application that the applicant fills out that says they fulfilled those requirements. And the November '99 application indicated that they had fulfilled those requirements.

The OAM was not aware that they had not fulfilled that requirement until Mrs. Karen Grube notified the OAM at end of March that she had tried to locate a copy of the permit application and could not locate a copy. At that time, the OAM was processing the preliminary findings for public review and felt that extending the public comment period was adequate to compensate for the application not being placed in the library originally. This extended period would allow Mrs. Grube to have the opportunity to review the application for a greater period of time as she would have had if the application had been placed in the library when she first attempted to look at it. Subsequently in discussions with Dr. Rybarczyk and also with Mrs. Grube, several people attempted to have access to the permit application in the library. After receiving this information, the OAM began discussion with Dayton Power and Light (DPL) regarding their obligation to provide the permit application, and DPL decided to withdraw the application. The OAM determined that since DPL was going to go ahead and withdraw the permit, we would not deny the permit and end up possibly in litigation over how they fulfilled the requirement. On June 8, 2000, DPL withdrew permit application 11528 and submitted a new permit application 12321. The OAM then wrote a letter acknowledging the fact that DPL had withdrawn that application. This letter was sent to people who had expressed interest in this project either by phone or letter. On June 8, 2000, the OAM contacted the Wells County Public Library to confirm if the application had been received. It was confirmed by a library staff member that the application was received the afternoon of June 8, 2000.

In regards to the location of the permit application in the library, the OAM has no jurisdiction on this subject.

Comment 7: A serious health hazard is the very fine particles less than 2.5 microns in diameter, that will be released to the atmosphere by new power plants and other industrial facilities, should they be built and operated. The adverse health effects include the increased number and severity of asthma attacks in children and adults; increases in episodes of breathlessness and other kinds of distress; and people suffering from chronic bronchitis, emphysema, and other pulmonary diseases leading to more emergency room visits and hospitalizations. There's abundant evidence that heart attacks and even premature death in people with preexisting cardiovascular diseases are triggered by quite moderate increases in atmospheric levels of particulate matter, for those at greatest risk

are children and elderly. Large numbers of individuals of normal health may experience frequent and more serious episodes of flu, colds, and other respiratory diseases. Natural gas-fired power plants are a potent source of extremely hazardous tiny particles 2.5 microns or less in diameter. All of the particulate matter produced by gas fired turbines of the power plants will be less than 2.5 microns in diameter. In fact, all of it will be less than 1 micron in diameter, and consist largely of organic compounds referred to as products of incomplete combustion. Some hazardous trace metals will also be released along with the PIC's." No power plant operates at peak capacity 100 percent of the time. The Athens air permit requires that to operate the gas-fired turbines at least 75 percent of the time. This corresponds to a minimum total of 336 tons per year of very fine particulate matter from these turbines. Seventy-five percent of the maximum emissions allowed from the oil-burn turbines would inject another 25 tons per year into the local atmosphere. The resulting total of about 360 tons per year for the ten eighty megawatt may be used as the basis or rough estimate of the PM_{2.5} emissions from the other natural gas-fired plants. The emission rate is proportional to the megawatt capacity of the plant and the percentage of time it operates each year. And these are things that aren't considered yet by the EPA. They thought that it was just the big particles that were harmful. But when they do studies and find out that maybe the other smaller particles are more harmful than the big ones. And I'm afraid they'll be grandfathered in like the coal plants. Our air would be a lot cleaner if they hadn't grandfathered those coal plants in.

Response 7: Natural gas produces very small amounts of PM and PM₁₀. Particulate Matter emissions from turbines primarily result from carryover of noncombustible trace constituents in the fuel. PM₁₀ and PM emissions are limited to less than 250 tons per year. By limiting NOx and CO emissions to less than 250 tons per year, the other criteria pollutants, such as PM and PM₁₀, will also be less than 250 tons per year. The limited potential to emit of PM₁₀ is equal to 6.97 tons per year. Based on the air quality analysis, the emissions produced will not have a significant impact on human health.

In regards to PM_{2.5}, EPA issued a new National Ambient Air Quality Standards for Particulate Matter less than 2.5 microns (PM_{2.5}) on July 17, 1997. Due to a legal challenge to the new standard, however U.S. EPA has released specific guidance stating that states should continue to analyze PM₁₀ impacts for all New Source Review. There are 3 primary origins of PM_{2.5}: 1) primary particulate in the solid state, 2) condensible particulate and 3) secondary particulate formed through atmospheric reactions of gaseous precursor emissions. There will be a five-year scientific review of this standard which includes installation of PM_{2.5} monitors throughout the state to better define background concentrations and gather source specific information. EPA is expected to release a new dispersion model to better predict PM_{2.5} concentrations. There are no assumed ratio of PM_{2.5} to PM₁₀ at this time. As more information becomes available, a more detailed analysis of PM_{2.5} can be conducted.

The air quality analyses conducted demonstrates that air quality in the vicinity of the plant will continue to comply with the National Ambient Air Quality Standards (NAAQS). The OAM utilizes a computer model, which is approved by the USEPA, to predict what impact the emissions from the plant will have on the air the community breathe and compares them to the standards that are established to protect public health. Based on the air quality analysis, no significant impact on public health or welfare are expected to occur as a result of the emissions from the proposed facility. In addition, this plant's emissions for NOx, SO₂ and CO will be continuously monitored. The records of the emissions will be required to be maintained and submitted to the OAM on a quarterly basis and available to the public.

Comment 8: We transported out of state 20 percent of our electricity last year. We don't need the electricity. We need to upgrade our grid power. Our grid systems are antique. They

can't even handle what we have now. That's why we have power shortages, and that's why a lot of people think we need electricity. These companies are coming in, and they're going to use our grids and our electricity transmission systems, and ours are already antique the way it is. And I don't think that's fair. If it was such a good deal, why isn't it okay. If it's such a good deal, why isn't it Indiana investors? Why can't we keep the money in the state? I think it'll be just like interstate dumping. We will not be able to stop it from happening in Indiana, the hazardous waste capital of the world. Do we really want to put Jeff, Indiana on the map this way?

Response 8: The Office of Air Management (OAM) has no regulatory authority in regards to the selling of electricity or the current grid system. Options for finding additional information on the selling of electricity or the grid system are to contact the Indiana Utility Regulatory Committee or one's State Representative.

Comment 9: A lot of the information that I looked at said Jeff, Indiana; a lot of it said Montpelier, Indiana; and a lot of it said Poneto, Indiana. I found it hard to locate exactly where the plant was.

Response 9: Based on the permit application, dated June 8, 2000, the plant is proposing to locate 8265 South 450 West, Poneto, Indiana. The application does not list Jeff, Indiana. The OAM has no legal authority over the name of the source. In this case, the name of the source is the Montpelier Electric Generating Station.

Comment 10: In 2000, the American Cancer Society estimates 1,220,100 new cancer patients will be diagnosed in the United States including 27,900 in Indiana. 552 (sic) cancer deaths will occur in the United States including 12,600 in Indiana. Indiana ranks 19th overall in cancer mortality rates among the 50 states and Washington, D.C. The average annual age-adjusted mortality rate for cancer deaths per 100,000 persons in Indiana is 177.6 against a national average of 170.1. Cancer facts and figures: 1999 cancer incidence 90, dash, 94 ranks Indiana as 17th for female breast cancer, 13th for male colon and rectum cancer, 10th for female rectum cancer, 13th for male lung and bronchitis cancer, 9th for female lung and bronchitis cancer, and 30th for male prostate cancer. The occupational risk factors that support a casual association with cancer include benzene, chromium, vinyl chloride, nickel, arsenic, cadmium, benzene, carbon tetrachloride, formaldehyde. And these are some of the same agents that are in this construction permit. Mercury is also listed in this construction permit. Mercury that we've been hearing about on the news. These plants also emit carcinogens such as formaldehyde and hexane. To quote the Citizens Power 2000, page 8, "Air emissions from these plants are not insignificant." According to State Line, which has proposed a facility in Hammond, Indiana and is owned by the Southern Company based in Atlanta, has estimated nitrogen oxide emissions for its 550 megawatt plant to be 146 tons per year. Nitrogen oxide, particularly in a non-attainment area for ozone, is targeted by new EPA regulations because of its severe impact on public health relative to respiratory illness. Are construction workers, farmers, children, older people with respiratory problems more susceptible? It should be noted that the accuracy of merchant plant developers' air emissions data should be questioned by local residents. In a case of LS Power in Columbus, the company estimated formaldehyde emissions at 6.74 tons per year. However, an expert witness for the local citizens group, Power Plant Information Committee of Bartholomew County, estimated that the consultants for the company used an emission factor for formaldehyde that was only 6.7 percent of the EPA emission factor. As a result, formaldehyde emissions would be closer to 60 tons per year. This means instead of emitting 6.74 tons per year as on the construction permit, it was 60 tons a year.

Response 10: OAM presently requests data concerning the emission of 188 Hazardous Air Pollutants (HAPs) listed in the 1990 Clean Air Act Amendments which are either carcinogenic or

otherwise considered toxic and may be used by industries in the State of Indiana. These substances are listed as air toxic compounds on the State of Indiana, Department of Environmental Management, Office of Air Management's construction permit application Form Y. Any one HAP over 10 tons/year or all HAPs with total emissions over 25 tons/year will be subject to toxic modeling analysis. The modeled emissions for each HAP are the total emissions, based over 8760 hours per year. The resulting concentrations from the limited HAP emission are less than the total HAP emissions, based on permitted limits of operation over a year. For conservative purposes, the total emissions were modeled and the maximum concentrations were used. Based on such modeling, the OAM has determined that there will be no significant impact.

Formaldehyde is not a specifically regulated pollutant unless the emissions exceed 10 tons per year. In this case, the limited potential of emit of formaldehyde is less than 10 tons per year. Because of the concern about formaldehyde and the importance of having good information, one of the things the OAM does require in this permit, as well as other similar permits, is that the source will be required to perform stack tests for formaldehyde when burning natural gas. The stack test would detect if formaldehyde emissions were, in fact, over 10 tons per year. If the emission exceed 10 tons per year, then 326 IAC 2-4.1 (New Source Toxics Rule) would be applicable. This rule would require the source to apply the maximum achievable control technology. The emission factor development is discussed in detail under Response #3 of this section.

In regards to State Line, this is an existing major source. The source currently has a major modification permit application under review. This source is subject to the Emission Offset Rule (326 IAC 2-3) which applies to construction of new major sources or major modifications of existing sources in areas of the state that are nonattainment. In areas that are not in attainment with existing air quality standards, the limits on the construction of new plants or expansions are even more demanding. Therefore, State Line has more stringent emission limitations because it is subject to the major source rules, and the Montpelier Electric Generating Station is not. For further questions in regards to the State Line project, please contact Mr. Robert (Joe) Crawford at 317-233-0431.

Comment 11: It's my understanding that Indiana ranks second in the United States for air pollution. They've been warned by neighboring states, by EPA, either clean up their act or they're going to get fined. And I don't know if you can go from county to county within the state either. Because Allen County is almost at an alarming level right now. I wondered if a county could sue or could enforce it on another county.

Response 11: IDEM is moving forward to develop a state rule that would control NOx emissions. Over the past 10 years, it has become clear that the best way to bring ozone values down across the country is to reduce emissions of NOx across the country and take, for the first time, a regional approach to reduce emissions. IDEM is currently working on an approach that will reduce emissions of NOx across the state by over 100,000 tons per year to bring areas into compliance with the ozone standard in Indiana and to not to contribute to any problems in other states.

Comment 12: What kind of air quality tests has been done on this plant?

Response 12: Since this plant has not been built, there has been no testing on it. Vendor information indicates that its design will comply with all permit requirements.

Comment 13: Has IDEM tested the air quality right now to determine if the quality gets worse after this new plant is in place.

Response 13: Currently, there are no air quality monitors in the southern Wells County area or in

northern Blackford County. Most of IDEM's monitoring efforts are in areas of high population and usually higher pollution levels. We do have monitors in areas similar to this that show for all pollutants, except in some cases ozone, that air quality meets the standards. We have ozone monitors northeast of Indianapolis, but not as far northeast as the proposed project, and monitors located around Fort Wayne. The OAM uses computer modeling that both EPA and all the eastern United States are using to develop the plans to bring air quality into compliance with the National Ambient Air Quality Standards (NAAQS) for ozone. The data that is collected in different parts of the state is placed into the computer and predicts what ozone concentrations are in between the two places which have monitors. In addition, there is a write-up in the form of a technical support document to show that these types of plants are not going to increase ozone near the plant. IDEM staff are available to provide technical assistance and recommendations to local communities or other parties who want to establish a site to serve their purpose. Please contact Mr. Dick Zeiler at 317-308-3238 to request such assistance.

Comment 14: It is my understanding that Indiana normally ranks between first and fifth in air pollution, is that true?

Response 14: In the Toxic Release Inventory, (TRI) Indiana has ranked in the top 5 in releases of hazardous air water and soil pollutants in the country. In the latest years figures Indiana is 5th, but including new industries that are included this year (mostly power plants) Indiana falls to 9th.

Most of the toxic emissions in Indiana are from steel mills, metal foundries, plastics manufacturing, refineries and power plants.

The TRI report is online at: <http://www.epa.gov/tri/tri98/state/Indiana.pdf>.

Comment 15: Who will responsible for monitoring this plant?

Response 15: The permit requires that a continuous emissions monitoring system be installed. This system will record the amount of nitrogen oxides (NOx) and carbon monoxide (CO) emitted on a continuous basis. This data will be used for compliance, to ensure the ton per year limits are not exceeded. The source will be responsible for the submittal of a monitoring plan for NOx and CO. This monitoring plan must be approved by IDEM. The monitoring equipment must be installed, certified and operated in accordance with state and federal requirements. Such requirements are listed under 326 IAC 3-5 (Continuous Monitoring of Emissions). IDEM will be notified by the source prior to any required testing and will have the opportunity to witness all such testing to ensure it is conducted in accordance with all requirements. The source is also required to submit the recorded emissions data on a quarterly basis. Condition D.1.10 outlines the requirements of compliance determination for the continuous emissions monitoring system.

Comment 16: Are the merchant plants really used in the hottest times in the summer, when the electric demand is at its peak?

Response 16: These operations could be used at other times of the year, but typically they operate under extreme weather conditions such a hot summer months and cold winter months.

Comment 17: It appears that the stack heights vary from permit to permit with these type of operations. Why?

Response 17: The different stack heights are predicted on the design of the plant and may also be regulated by local planning commission.

Comment 18: If the stack was taller, how would this affect the air quality?

Response 18: It would affect the predictions that the OAM has determined in the air quality analysis. The taller stack will have less of an impact in the vicinity of the plant than a shorter stack. Ozone modeling is not affected by stack height.

Comment 19: Is this the same time when the public is told not to mow their yards or fill up their gas tanks, and then this source is going to be operating during such times?

Response 19: These operations could be used at other times of the year, but typically they operate under extreme weather conditions such as hot summer months and cold winter months. The OAM is working diligently to have the NOx control plan implemented which will reduce NOx emissions by 100,000 tons per year. This plan will account for emissions from this facility and is designed to bring ozone levels below the standard.

Comment 20: Is it true that the United States is trying to get out of some environmental agreements with other countries because we are not doing what we said we would do?

Response 20: IDEM has no jurisdiction over Congress and International Treaties. IDEM can only implement the Clean Air Act and the state law.

Comment 21: If you compare the GM plant to the power plants, you'll find out which are high risk and which are high emissions. The GM plant in Fort Wayne and Marion have low emissions and the power plants have high emissions.

Response 21: Volatile Organic Compounds (VOC) are the highest emissions produced from the General Motor's Ft. Wayne and Marion plants. Based on emissions dated from 1999, the potential to emit VOC under the permit for this plant is 3,680 tons per year and the actual emissions are 1,702 tons per year. The potential to emit of NOx is 953 tons per year and the actual emissions are 117 tons per year.

The Montpelier Electric Generating Station's permit limits its VOC, to less than 15 tons per year, and potential to emit of NOx to less than 250 tons per year.

Comment 22: If they use so much water, then will they use that much fuel? What is the percent basis?

Response 22: This information can be located in the permit application in Table 1. If one converts the water flow per turbine that is in gallons to pounds, it can be compared to the fuel flow which is in pounds per hour. For example, at 100% load on a 15 degree day, water injection is projected to be 26.80 gallons per minute, or 223.646 pounds per minute. The fuel flow is 12,802 pounds per hour, or 213.367 pounds per minute. This would result in a water-to-fuel ratio of 1.05:1

Comment 23: How are they going to monitor and test their emissions?

Response 23: The permit requires that a continuous emissions monitoring system be installed. This system will record the amount of nitrogen oxides (NOx) and carbon monoxide (CO) emitted on a continuous basis. This data will be used for compliance, to ensure the ton per year limits are not exceeded. The source will be responsible for the submittal of a monitoring plan for NOx and CO. This monitoring plan must be approved by IDEM. The monitoring equipment must be installed, certified and operated in accordance with state and federal requirements. Such requirements are listed under 326 IAC 3-5 (Continuous Monitoring of Emissions). IDEM will be notified by the source prior to any required testing and will have the opportunity to witness all such testing to ensure it is conducted in accordance with all requirements. The source is also required to submit the recorded emissions data on a quarterly basis. Condition D.1.10 outlines the requirements of

compliance determination for the continuous emissions monitoring system. In addition, the source will be required to test for Formaldehyde at variable loads. This testing will establish the exact formaldehyde emissions and ensure that the source is complying with the less than 10 ton per year limit established in the permit.

Comment 24: Can you explain the Best Available Control Technology?

Response 24: If the source emitted more 250 tons per year or more, the source would be subject to the Prevention of Significant Deterioration (326 IAC 2-2 and 40 CFR 52.21). This rule would require the source to install and apply the best available control technology currently permitted in the United States. For example, the source could be required to install a catalytic oxidation system or be required to reduce the concentration of NOx even further. However, this source is not subject to the best available control technology application because the emissions are limited to less than 250 tons per year.

Comment 25: What are the differences between a major and minor air permit?

Response 25: This source request a minor permit by taking a limit on their emissions to less than 250 tons per year, which means that there is only a limited number of rules that apply such as the federal new source performance standard. These emissions will be monitored on a continuous basis. If the source was major, then the best available control technology would have to be applied. There is also a requirement that the source run a modeling analysis to demonstrate what could cause or contribute to a violation of a health-based standard. Also, the major source permitting rules place limits on the incremental increased air pollution that the major source could emit, and a demonstration would be required. The modeling that the OAM has done demonstrates that the source will be well below those increments.

Comment 26: Will there be algae in the stacks?

Response 26: This source will not be using cooling towers where water is used to cool the process. The OAM is not aware of any algae problems when burning natural gas or fuel oil for this type of operation.

Comment 27: Will the storage tank be safe?

Response 27: The tank used stores the back-up fuel oil. This tank is subject to 40 CFR Part 60, Subpart Kb. This rule requires that the source maintain the records of the volatile organic liquid (VOL) stored, the period of storage and the maximum true vapor pressure of the volatile organic liquid (VOL) during the respective storage period for the tank. In addition, the source must keep records showing the dimension of the storage tank and an analysis showing the capacity of the storage tank and have such readily accessible. Also, the source must notify the USEPA and IDEM within 30 days when the maximum true vapor pressure of the liquid exceeds the respective maximum true vapor pressure values for each volume range.

Based on the potential to emit calculations, the VOC emissions generated from the storage tank are considered negligible by the Office of Air Management.

Comment 28: Would fuel switching be allowed?

Response 28: Currently the source is permitted to burn natural gas as the primary fuel and use fuel oil as a back-up fuel source. If the source would want to increase the amount of oil usage or switch to another type of fuel that would produce higher emissions, then the source would need to obtain prior approval from IDEM before the switching could occur.

Comment 29: Does the Vermillion plant have any startup and shutdown problems?

Response 29: Currently major sources, such as the Vermillion plant, are being permitted to allow for higher emissions during a startup and shutdown period. This source has limited operational data at this time. However, the next season of operation should provide more data for review.

Comment 30: 744 degrees sounds like a high temperature to me. Where do they measure that at?

Response 30: There are no state rules which govern exhaust gas temperatures. However, the exhaust temperature can be located in our technical support document. This affects the way the air pollution disperses. The hotter the exhaust gas temperature, the higher the pollution goes up. Therefore, it has less of an impact on air quality.

Comment 31: I read where turbines are on back order because there are so many. What assurance do I have that the turbines in the air permit will be the actual turbines used?

Response 31: The air permit cannot require a certain type of manufacturer's turbine to be used. The permit can only limit the emissions to a certain level regardless of the type of turbine. The source will operate in simple cycle mode regardless of the type of turbine used.

In addition, the back order is for the GE Frame 7 turbines and this source is intending to use the Pratt and Whitney FT8 Twin Pack units. However, the source is not required to use this type of turbine.

Comment 32: How energy efficient are these turbines?

Response 32: The efficiency is on average thirty (30) percent.

Comment 33: Does it matter how far the electricity travels? I mean, does it lose some as it goes farther?

Response 33: Air pollution control rules do not regulate the travel of electricity. It is the OAM's understanding that some electricity will be lost when traveling.

Comment 34: So they would be better off locating in a place that needs the electricity other than in Indiana?

Response 34: Air pollution control rules do not regulate plant location decisions. It is the OAM's understanding that the facility is acceptable under local zoning requirements. Local governments have jurisdiction on zoning issues.

Comment 35: Who is going to monitor the trucks going past my house?

Response 35: Although OAM has no regulatory authority to limit the trucks going to and from the plant, OAM staff have discussed this with the company who have indicated that this travel will not be frequent since the oil usage is limited to a small amount.

Comment 36: How does the OAM schedule the dates of their public hearings?

Response 36: The OAM establishes dates for public hearings that will be workable for all parties involved. The hearing is typically held during the evening where people who are interested can attend. Typically hearings are not established on Friday evenings or weekends.

Comment 37: The permit application states that one of adjoining property owners is Jimmy Frantz, yet

that person is Nyal Frantz. Jimmy Frantz lives within a mile of Southern Wells on the other side. So was Nyal Frantz properly notified?

Response 37: Based on the information submitted by Dayton Power and Light on November 27, 2000, the source properly submitted a written document to a Mr. Nyal Frantz who lives in 391 S. Woodland, Clyde Ohio. He signed receipt of this notification on June 29, 2000.

The following comments were presented by **Mr. Robert Miller**:

Comment 1: I heard a comment come up about acid rain and the acid rain permit. I just want to get an understanding of what we could expect as homeowners living close to the site.

Response 1: The 1990 Clean Air Act created what is titled the acid deposition control program. The purpose of this program was to dramatically reduce the emissions of the pollutants that cause acid rain and to reduce the effects of acid rain. Currently, emissions of sulfur dioxide, for instance, have been reduced by ten million tons across the United States. The second phase of the acid rain program affected emissions of oxides of nitrogen. There are not any provisions of this program that apply to this plant. But with respect to SO₂, sulfur dioxide, there is essentially a nationwide cap that emissions cannot increase above. So even when a new plant is permitted, the program is set up to be a market-based program that relies on trading, the plant has to buy purchase SO₂ emissions in order to operate. Therefore, if some power plant were required to reduce their emissions from 1,000 tons to 500 tons, the plant might reduce down to 400 tons, and the plant would have a hundred tons of credit they could sell to another plant. Any SO₂ emissions that are emitted by this plant will require DPL to purchase an equal amount of credits from another plant. The Clean Air Act addresses this national problem by greatly reducing SO₂ emissions across the country. The program was not set up to look at any local effects that an individual plant would have. But if emissions are reduced by a very large amount across the country, then the impact of acid rain would be much diminished. Currently the acid rain permit has not been issued as final.

Comment 2: But, I mean, have you been to a site? Have you witnessed any acid rain? Have you ever seen any effect it has? Does it eat up their house paint? Is it eating up their car paint? I mean, what kind of effects does it have?

Response 2: The acid rain control program is set up to reduce emissions on a national basis and not to reduce such emissions on a local basis. This program is set up to reduce the acidity of rain by reducing the emissions by 10 million tons. The OAM does not have any information whether there would be any impact locally.

Comment 3: Maybe we can monitor the air level now and established a baseline to compare to what the impact of this plant would be. How do we plant for something like that to get it in place?

Response 3: Currently, there are no air quality monitors in the southern Wells County area or in northern Blackford County. Most of IDEM's monitoring efforts are in areas of high population and usually higher pollution levels. We do have monitors in areas similar to this that show for all pollutants, except in some cases ozone, that air quality meets the standards. We have ozone monitors northeast of Indianapolis, but not as far northeast as the proposed project, and monitors located around Fort Wayne. The OAM uses computer modeling that both EPA and all the eastern United States are using. The data that is collected in different parts of the state is placed into the computer and predicts what ozone concentrations are in between the two places which have monitors. In addition, there is a write-up in the form of a technical support document to show that these types of plants are not going to increase ozone near the plant. IDEM staff are available to provide technical assistance and recommendations to local communities or

other parties who want to establish a site to serve their purpose. Please contact Mr. Dick Zeiler at 317-308-3238 to request such assistance.

The following comments were presented by **Ms. Christina Furnish**:

Comment 1: Who is responsible if the asthma and cancer rates go up? Who will guarantee that my children will not be affected by the pollution from this plant?

Response 1: The air quality analyses conducted demonstrates that air quality in the vicinity of the plant will continue to comply with the National Ambient Air Quality Standards (NAAQS). The OAM utilizes a computer model, which is approved by the USEPA, to predict what impact the emissions from the plant will have on the air the community breathe and compares them to the standards that are established to protect public health. Based on the air quality analysis, no significant impact on public health or welfare are expected to occur as a result of the emissions from the proposed facility. In addition, this plant's emissions for NO_x, SO₂ and CO will be continuously monitored. The records of the emissions will be required to be maintained and submitted to the OAM on a quarterly basis and available to the public.

The following comments were presented by **Mr. Roger Grover**:

Comment 1: What is the life expectancy of one of these types of plants?

Response 1: The OAM has no jurisdiction how long a plant will be in operation. However, it is expected that the life expectancy will depend on how much the plant is utilized and the demand for electricity.

Comment 2: Will they go to nuclear energy after this?

Response 2: These turbine generators are not compatible with any equipment used by a nuclear power plant.

The following comments were presented by **Ms. Mary Price**:

Comment 1: As one of the closest neighbors to this place, any notification that did come, even came in the wrong name. They couldn't even get my husband's name right. It came as Doug instead of Dorsey.

Response 1: Based on the information submitted by Dayton Power and Light on November 27, 2000, the source properly submitted a written document to the owners or occupants listed on Form EE-1. The source submitted copies of all the certified mail receipts that went to the owners or occupants and in addition submitted a copy of the letter that was mailed out. IC 13-15-8-2 does not require registered mail, but that notification be submitted in writing. The source did submit such written notification by certified mail.

The following comments were presented by **Mr. Barry Story**:

Comment 1: Do the letters sent out to adjoining owners have to be sent registered mail?

Response 1: The notice shall be in writing, include the date on which the application for the permit was submitted to the OAM and include a brief description of the subject of the application. Based on the information submitted by Dayton Power and Light on November 27, 2000, the source properly submitted a written document to the owners or occupants listed on Form EE-1. The source submitted copies of all the certified mail receipts that went to the owners or occupants and in addition submitted a copy of the

letter that was mailed out. IC 13-15-8-2 does not require registered mail, but that notification be submitted in writing. The source did submit such written notification by certified mail.

The following comments were presented by **Ms. Kristie Fuller**:

Comment 1: The cancer rate is high in Indiana and probably ten percent higher than the national average. One out of every nine Indiana residents die of cancer. I have read an article that's put out by the National Cancer Society (sic) on their Internet site about formaldehyde. And it says, "...noted a 30-percent increase in lung cancer mortality among industrial workers..." It also says, "By 1987, EPA classified formaldehyde as a 'probable human carcinogen'..." And it also says that anyone who works in an industrial setting or presumably lives in an industrial setting is at greater risk for lung cancer because of the formaldehyde. We also have an article from the Sierra Club which is put out on their website. And according to this, Carl Pope, Sierra Club executive director, one of the articles he did says, "Cancer is a major health problem and the second leading cause of disease-related deaths, and cancer caused by air pollution is the worst of these deaths (sic)." People don't have a choice in the air they breathe. This report shows that we need a lot more attention to reducing cancer-causing chemicals released into our community. We also have one put out by the Environmental Policy and Children's Health, which also says children today live in an environment vastly different than a generation ago. It says children have greater exposure to environmental toxins than adults. Pound for pound by body weight, children drink more water, eat more food, and breathe more air than adults. For example, children in the first six months of life drink seven times as much water per pound as does the average adult. Whatever's in that pollutant or contaminant in that water, they get seven times as much.

Response 1: The overall program at IDEM, OAM is to adopt and implement federal rules enacted under the 1990 Clean Air Act Amendments (CAA). The OAM presently requests data concerning the emission of 188 Hazardous Air Pollutants (HAPs) listed in the CAA which are either carcinogenic or otherwise considered toxic and may be used by industries in the State of Indiana. These substances are listed as air toxic compounds on the State of Indiana, Department of Environmental Management, Office of Air Management's construction permit application Form Y. Any one HAP over 10 tons/year or all HAPs with total emissions over 25 tons/year will be subject to toxic modeling analysis. The modeled emissions for each HAP are the total emissions, based over 8760 hours per year. The resulting concentrations from the limited HAP emission are less than the total HAP emissions, based on permitted limits of operation over a year. For conservative purposes, the total emissions were modeled and the maximum concentrations were used. Based on such modeling, the OAM believes that there will be no significant impact.

Formaldehyde is not a specifically regulated pollutant unless the emissions exceed 10 tons per year. In this case, the limited potential of emit of formaldehyde is less than 10 tons per year. Because of the concern about formaldehyde and the importance of having good information, one of the things the OAM does require in this permit, as well as other permits, is that the source will be required to perform stack tests for Formaldehyde when burning natural gas. The stack test would detect if formaldehyde emissions were, in fact, over 10 tons per year. If the emission exceed 10 tons per year, then 326 IAC 2-4.1 (New Source Toxics Rule) would be applicable. This rule would require the source to apply the maximum achievable control technology.

In the Toxic Release Inventory, (TRI) Indiana has ranked in the top 5 in releases of hazardous air water and soil pollutants in the country. In the latest years figures Indiana is 5th, but including new industries that are included this year (mostly power plants) Indiana falls to 9th.

Most of the toxic emissions in Indiana are from steel mills, metal foundries, plastics manufacturing, refineries and power plants.

The TRI report is online at: <http://www.epa.gov/tri/tri98/state/Indiana.pdf>.

In addition, IDEM is moving forward to develop a state rule that would control NOx emissions. Over the past 10 years, it has become clear that the best way to bring ozone values down across the country is to reduce emissions of NOx across the country and take, for the first time, a regional approach to reduce emissions. IDEM is currently working on a state rule that will reduce emissions of NOx across the state by over 100,000 tons per year.

Comment 2: Asthma is going through the roof in Indiana. And here again, you can get on the National Center for Health Statistics and get their vital statistics to come up. Males, females, young adults, everybody, it's going straight up. And one of the main problems with asthma is that they have formaldehyde in the air. It retards their lung growth. And what are we doing? We're dumping it out at the school where the children are there. What about the effects on the fine particulate on our children?

Response 2: Natural gas produces very small amounts of PM and PM₁₀. Particulate Matter emissions from turbines primarily result from carryover of noncombustible trace constituents in the fuel. PM₁₀ and PM emissions are limited to less than 250 tons per year. By limiting NOx and CO emissions to less than 250 tons per year, the other criteria pollutants, such as PM and PM₁₀, will also be less than 250 tons per year. The limited potential to emit of PM₁₀ is equal to 6.97 tons per year. Based on the air quality analysis, the emissions produced will not have a significant impact on human health.

In regards to PM_{2.5}, EPA adopted a new National Ambient Air Quality Standards for Particulate Matter less than 2.5 microns (PM_{2.5}) on July 17, 1997. Due to a legal challenge to the new standard, however U.S. EPA has released specific guidance stating that states should continue to analyze PM₁₀ impacts for all New Source Review. There are 3 primary origins of PM_{2.5}: 1) primary particulate in the solid state, 2) condensable particulate and 3) secondary particulate formed through atmospheric reactions of gaseous precursor emissions. There will be a five-year scientific review of this standard which includes installation of PM_{2.5} monitors throughout the state to better define background concentrations and gather source specific information. EPA is expected to release a new dispersion model to better predict PM_{2.5} concentrations. There are no assumed ratio of PM_{2.5} to PM₁₀ at this time. As more information becomes available, a more detailed analysis of PM_{2.5} can be conducted.

The air quality analyses conducted demonstrates that air quality in the vicinity of the plant will continue to comply with the National Ambient Air Quality Standards (NAAQS). The OAM utilizes a computer model, which is approved by the USEPA, to predict what impact the emissions from the plant will have on the air the community breathe and compares them to the standards that are established to protect public health. Based on the air quality analysis, no significant impact on public health or welfare are expected to occur as a result of the emissions from the proposed facility. In addition, this plant's emissions for NOx, SO₂ and CO will be continuously monitored. The records of the emissions will be required to be maintained and submitted to the OAM on a quarterly basis and available to the public.

Comment 3: Another thing that came to mind is that I read an article in the newspaper, probably with everybody else, about how the states back east are very unhappy because Indiana's a coal-burning state. We dump all this pollution in the air. It blows basically northeast. The states northeast of us get it. They get blamed for poor air. They yell at us and say,

"We're going to sue you 'cause you're ruining our air." I have come up with the same thought. I thought, "Okay. We put this in. The wind is a northeasterly pattern. Who northeast of us is going to get our pollution?" Now, will those communities up there, when we ruin their air, are they going to sue us? So I asked a few people. I asked two lawyers and two just regular businessmen, and they just looked at me for a minute and said, "I don't know. Nobody ever asked that before. That's a good question. We don't know." Now, maybe they can't. But if the states back east sue us and do it and get away with it and it sets a precedence, then what's to keep anybody else from suing southern Wells. Fort Wayne could sue southern Wells. Or assuming that someone southwest of southern Wells would put in a plant and blow their pollution up on us, same deal. We would get the pollution from them. Now we're stuck with their pollution. Are we going to sue them, and do we want to? Because whatever happened to the good neighbor policy? You know, there used to be this old saying about "Do unto others as you would have them do unto you." So that's okay because we're putting out the pollution, but that's okay 'cause Fort Wayne's going to get it. We don't have to worry about it. We got stacks high enough it's going to blow off. Is that really what we want to do? What keeps everybody else from doing the same thing to us? And could we complain? No, because we're doing it to everybody else. There's a good neighbor policy involved here. Be prepared, you're going to have to take responsibility for your actions. And if you dump all these things out in the air, whoever they land on is going to hold you accountable and responsible. And even if the Fort Wayne's level never gets high, and even if they're good neighbors and never say a word about it if it does, still it's our fault that their air is high in pollutants and toxins. It's going to be our fault.

Response 3: This issue is in regards to other states filing suit against Indiana and EPA, issuing a call for Indiana to improve our state implementation plan with the pollutant ozone. Ozone is one pollutant that still has areas of the state that do not meet the air quality standards. This new standard for ozone is another air quality standard, that the court ruled EPA could not enforce. The new standard for ozone indicates that Fort Wayne, if one were using that standard to measure air quality in Fort Wayne would be very close to the threshold. However, this standard is not in place. IDEM is moving forward to develop a state rule that would control NOx emissions. Over the past 10 years, it has become clear that the best way to bring ozone values down across the country is to reduce emissions of NOx across the country and take, for the first time, a regional approach to reduce emissions. IDEM is currently working on a that will reduce emissions of NOx across the state by over 100,000 tons per year, and bring ozone levels into compliance with the NAAQS.

Comment 4: Another thing that worries me on these pollutants is that this power plant is only going in putting in the minimum amount of protection they can get away with. I think that what we need to do before we do anything, since we do not know what the air quality is in this county, is install an air quality monitor in Wells County. I think that we should have a third party come in and do an independent air quality study on our air and see what it is before we build the plant.

Response 4: It's not possible for the IDEM to respond to every request for ongoing air quality data by establishing and operating new state monitoring sites. However, IDEM staff are available to provide technical assistance and recommendations to local communities or other parties who want to establish a site to serve their purpose. Please contact Mr. Dick Zeiler at 317-308-3238, to request such assistance. Note that Ms. Fuller in her comment did not specifically state that she was requesting IDEM to establish a new monitoring site.

Comment 5: If the source intends to run on natural gas only, then we want the fuel oil tank removed from the permit.

Response 5: The permit application states that the source will use fuel oil as a back-up fuel source only. Therefore, the fuel oil tank will remain in the air permit.

Comment 6: Will a scrubber be used?

Response 6: Natural gas is considered to be a clean burning fuel. Such fuel is required for combustion turbines in order to prevent damage to the turbine blades and other high-precision turbine components. The installation of a particulate control device is considered impractical because natural gas contains essentially no inert solids (ash). Traditional add on particulate control such as fabric filters, electrostatic precipitators, and scrubbers have not been applied to similar operations on the account of the high temperature regimes, fine particulate, and low particulate rates coupled with significant air flow rates. In addition the EPA RACT/BACT/LAER Clearinghouse database does not list any entries utilizing add on particulate matter control

Given the high combustion efficiency of the turbines and the firing of a clean fuel, the PM/PM₁₀ emissions will be very low.

Comment 7: I was never notified of this public hearing after I called into request that my name be placed on the notification list.

Response 7: The OAM has reviewed the notification list and your name now appears on our notification list.

Comment 8: Rick Mounsey was stated as being notified by registered mail, yet the permit application does not list him as being notified by registered mail.

Response 8: State law requires that the notice shall be in writing, include the date on which the application for the permit was submitted to the OAM and include a brief description of the subject of the application. Based on the information submitted by Dayton Power and Light on November 27, 2000, the source properly submitted a written document to the owners or occupants listed on Form EE-1. The source submitted copies of all the certified mail receipts that went to the owners or occupants and in addition submitted a copy of the letter that was mailed out. IC 13-15-8-2 does not require registered mail, but that notification be submitted in writing. The source did submit such written notification by certified mail.

The following comments were presented by **Mrs. Karen Grube**:

Comment 1: Why did it take a month or two, after it was brought to IDEM's attention that the initial air permit 11528 was not properly listed in the library, for the company to re-submit a new application to the library?

Response 1: The OAM was not aware that they had not fulfilled that requirement until Mrs. Karen Grube notified the OAM at end of March that she had tried to locate a copy of the permit application and could not locate a copy. At that time, the OAM was processing the preliminary findings for public review and felt that extending the public comment period was adequate to compensate for the application not being placed in the library originally. This extended period would allow Mrs. Grube to have the opportunity to review the application for a greater period of time as she would have had if the application had been placed in the library when she first attempted to look at it. Subsequently in discussions with Dr. Rybarczyk and also with Mrs. Grube, several people attempted to have access to the permit application in the library. After receiving this information, the OAM began discussion with Dayton Power and Light (DPL) regarding their obligation to provide the permit application, and DPL decided to withdraw the application. The OAM determined that since DPL was going to go ahead and withdraw the permit, we would

not deny the permit and end up possibly in litigation over how they fulfilled the requirement. On June 8, 2000, DPL withdrew permit application 11528 and submitted a new permit application 12321. The OAM then wrote a letter acknowledging the fact that DPL had withdrawn that application. This letter was sent to people who had expressed interest in this project either by phone or letter. On June 8, 2000, the OAM contacted the Wells County Public Library to confirm if the application had been received. It was confirmed by a library staff member that the application was received the afternoon of June 8, 2000.

Comment 2: Where is the acid rain permit at this time? I was told that it was no longer open for public comment.

Response 2: The acid rain was placed on public notice on March 24, 2000 and ended April 23, 2000. Currently, the acid rain permit is under review for final issuance. No written public comments were received during the public notice period.

Comment 3: Hasn't the trend around the state been that once one power plant is built at a site, there's another one built right next to it on the same site, and then it doesn't have to go through the same processes that the original plant does?

Response 3: In response to the first part of the question, a source can locate anywhere in the state as long as the source complies with the federal and state requirements and poses no threat to the public health.

In response to the latter part of the question, even if a power plant locates next to an existing power plant, that new plant must still go through review by the OAM.

The following comments were presented by **Mrs. Tera Fredrickson**:

Comment 1: What is the track history of Dayton Power and Light in Ohio?

Response 1: Based on an e-mail from Mr. Curt Marshall of the Ohio EPA's local agency dated November 29, 2000, the track record thus far is positive for both turbine plants (One is located in Montgomery County and is known as the 'Tait Plant' and the other is located in Darke County and is known as the 'Greenville Plant'), although the operating history of both is very limited. Three turbines were installed at Tait in 1995 and have been have been operating in a peaking mode since that time. Compliance was determined by stack testing at both peak and low load operating conditions. The other plant (Greenville) is even newer than the Tait plant, and began operations in June of 2000. The permit presently requires NOx to not exceed both a parts per million limit and a mass limit. Compliance is determined on the basis of a continuous emissions monitor.

If the source exceeds the established permit limits, then the source can face penalties up to \$25, 000 per day per violation. The source is required to submit a malfunction emission rate reduction program within one-hundred eighty (180) days after the commencement of operation. This program will include the normal operating emission rate and the program proposed to reduce emissions in the event of a malfunction to an emission rate that will not contribute to the cause of the violation of the ambient air quality standards established in 326 IAC 1-3. If a malfunction of any facility or emission control equipment occurs and lasts more than one (1) hour, said condition shall be reported to OAM. Notification shall be made by telephone or facsimile, as soon as practicable, but in no event later than four (4) daytime business hours after the beginning of said occurrence. If the source continues to knowingly violate the permit limitations, then the source could face criminal penalties. These penalties vary in cost and could lead to possible incarceration time.

The following comments were presented by **Ms. Sandra Watson**:

Comment 1: Emissions of nitrogen oxides from tall sources such as smokestacks are more likely than sources near ground level to travel downwind and increase ozone levels in surrounding urban and rural areas. As far as the stuff coming out of the smokestacks, older adults, children, and people with chronic lung diseases are especially sensitive to the particulate matter. This is right from IDEM. Recent studies indicate that the smallest particulates pose the most serious health risk because they can be inhaled more deeply into the lungs and are more difficult to exhale. Now, we have a real high cancer rate in my community, in Grant County, and in the state. And that's what I'm concerned about. I'm a nurse. The school system that my kids are in, there have been children, a couple of them, that have died from cancer, and we have an abnormally high rate of cancer out there. Now mind you, there's a landfill out there also. But this is from California, and this is dated October 20th, 2000. "Studies show air pollution slows lung function growth in children." And this is from USC. We see air pollution also is stronger in children who spend more time outdoors. "...ozone did not appear to play a major role in the pollution's effects on children's lungs. Instead, the offenders were nitrogen dioxide, microscopic particles known as particulate matter..." Which is exactly what's going to be emitted. "All come directly or indirectly from the burning of fossil fuels (the exhaust from a car or truck, for example), as well as emissions from industrial plants and other sources." "Researchers found that on the average, lung function growth in children (sic)...," That's what this is about, "...tended to be higher in cleaner communities and lower in areas with more air pollution." And like I say, we rank second for air pollution, and I think that's shameful. That bothers me because I've seen so many people with lung problems and with cancer. And I think that we need to do other things to promote, you know, good health so the people can feel better and work better and produce better.

Response 1: Natural gas produces very small amounts of PM and PM₁₀. Particulate Matter emissions from turbines primarily result from carryover of noncombustible trace constituents in the fuel. PM₁₀ and PM emissions are limited to less than 250 tons per year. By limiting NOx and CO emissions to less than 250 tons per year, the other criteria pollutants, such as PM and PM₁₀, will also be less than 250 tons per year. The limited potential to emit of PM₁₀ is equal to 6.97 tons per year. Based on the air quality analysis, the emissions produced will not have a significant impact on human health.

OAM presently requests data concerning the emission of 188 Hazardous Air Pollutants (HAPs) listed in the 1990 Clean Air Act Amendments which are either carcinogenic or otherwise considered toxic and may be used by industries in the State of Indiana. These substances are listed as air toxic compounds on the State of Indiana, Department of Environmental Management, Office of Air Management's construction permit application Form Y. Any one HAP over 10 tons per year or all HAPs with total emissions over 25 tons per year will be subject to toxic modeling analysis. The modeled emissions for each HAP are the total emissions, based over 8760 hours per year. The resulting concentrations from the limited HAP emission are less than the total HAP emissions, based on permitted limits of operation over a year. For conservative purposes, the total emissions were modeled and the maximum concentrations were used.

The air quality analyses conducted demonstrates that air quality in the vicinity of the plant will continue to comply with the National Ambient Air Quality Standards (NAAQS). The OAM utilizes a computer model, which is approved by the USEPA, to predict what impact the emissions from the plant will have on the air the community breathe and compares them to the standards that are established to protect public health. Based on the air quality analysis, no significant impact on public health or welfare are expected to occur as a result of the emissions from the proposed facility. In addition, this plant's emissions for NOx, SO₂ and CO will be continuously monitored. The records of the emissions will be required to be maintained and submitted to the OAM on a quarterly

basis and available to the public.

In addition, IDEM is moving forward to develop a state rule that would control NOx emissions. Over the past 10 years, it has become clear that the best way to bring ozone values down across the country is to reduce emissions of NOx across the country and take, for the first time, a regional approach to reduce emissions. IDEM is currently working on a that will reduce emissions of NOx across the state by over 100,000 tons per year.

Comment 2: Is this enforceable, will IDEM enforce this permit?

Response 2: The permit outlines how IDEM, OAM will enforce the emission limitations established in this permit. The permit requires that a continuous emissions monitoring system be installed. This system will record the amount of nitrogen oxides (NOx) and carbon monoxide (CO) emitted on a continuous basis. This data will be used for compliance, to ensure the ton per year limits are not exceeded. The source will be responsible for the submittal of a monitoring plan for NOx and CO. This monitoring plan must be approved by IDEM. The monitoring equipment must be installed, certified and operated in accordance with state and federal requirements. Such requirements are listed under 326 IAC 3-5 (Continuous Monitoring of Emissions). IDEM will be notified by the source prior to any required testing and will have the opportunity to witness all such testing to ensure it is conducted in accordance with all requirements. The source is also required to submit the recorded emissions data on a quarterly basis. Condition D.1.10 outlines the requirements of compliance determination for the continuous emissions monitoring system. In addition, the source will be required to test for formaldehyde. This is also to insure that the source does not exceed the emission limitation established for formaldehyde.

If the source exceeds the established permit limits, then the source can face penalties up to \$25, 000 per day per violation. The source is required to submit a malfunction emission rate reduction program within one-hundred eighty (180) days after the commencement of operation. This program will include the normal operating emission rate and the program proposed to reduce emissions in the event of a malfunction to an emission rate that will not contribute to the cause of the violation of the ambient air quality standards established in 326 IAC 1-3. If a malfunction of any facility or emission control equipment occurs and lasts more than one (1) hour, said condition shall be reported to OAM. Notification shall be made by telephone or facsimile, as soon as practicable, but in no event later than four (4) daytime business hours after the beginning of said occurrence. If the source continues to knowingly violate the permit limitations, then the source could face criminal penalties. These penalties vary in cost and could lead to possible incarceration time.

Comment 3: If they exceed will IDEM shut them down?

Response 3: If the source exceeds the limits established in the permit, then the IDEM will take enforcement action as appropriate, which typically does not begin by shutting a plant down. It typically begins with a financial penalty of up to \$25, 000 per day per violation. The Office of Enforcement is a separate part of IDEM. Each office of IDEM does not have it's own enforcement branch. This centralization allows for more consistency across the program. The OAM writes permits that are as clear and detailed as possible so the OAM inspectors, the Office of Enforcement and the company have a clear picture of what to follow in order to show compliance.

The following comments were presented by **Mr. Garry Jones**:

Comment 1: The information that shows noncompliance is available?

Response 1: Any compliance information is made available to the public. This information can be located in IDEM's centralized file room located in the Indiana Government Center North Building on the 12th floor. General public can contact Ms. Thea Grant at 317-234-0963. The status of enforcement cases can be made to the Office of Enforcement at 317-232-8456.

The following comments were presented by **Dr. James Rybarczyk**:

Comment 1: How does permitting this power plant make Indiana a cleaner and healthier place to live. This is quoted from the IDEM mission statement of Lori Kaplan, IDEM Commissioner.

Response 1: The OAM works to safeguard the quality of Indiana's air through implementing the requirements of the Clean Air Act, developing state rules governing air quality standards, evaluating and issuing permits for construction and operation, and monitoring Indiana's air quality. Together these programs continue to reduce the levels of air pollution across the state every year. Rules have been enacted that require reductions of particulate matter, lead, carbon monoxide, sulfur dioxide, and ozone pre-cursors in many areas of the state where air quality did not meet the health-based air quality standards. These rules brought 7 counties into compliance with the standards for particulate matter, 2 counties into compliance with the standard for lead, 2 counties into compliance for carbon monoxide, 4 counties into compliance for sulfur dioxide, and 3 counties into compliance with the one-hour ozone standard. Several ongoing programs that the OAM implements to meet ozone standards state-wide, implement the National Emissions Standards for Hazardous Air Pollutants, and reduce acid deposition have been previously been mentioned.

Any new source of air pollution requires a permit from the OAM. Larger sources of air pollution face more strict control requirements. During new source review the OAM evaluates the existing rules to ensure that the new source will not cause or contribute to health-based standards. Additional limitations are required when necessary to protect these standards. The permit also adds case-by-case provisions for monitoring compliance with all emission limitations set forth in the permit. The permit identifies the applicable requirements, describes what is necessary to comply with those requirements, and establishes monitoring, record keeping, and reporting requirements to demonstrate compliance on a day-to-day basis. Establishing the standards necessary to comply with technical and health-based standards and ensuring compliance with those standards dovetails with the overall program of safeguarding air quality.

Comment 2: What is the starting about air quality in Wells County right today? Before we do any permitting, I think we need to know what is coming into the community. People have already talked about our starting point here in Indiana. Carbon dioxide, Indiana ranks second; nitrogen oxide, third; sulfur dioxide, third; No. 1 in suspected reproductive toxicant; No. 2 in recognized cancer. DPL's emissions will increase the amount of air pollution emitted by industrial sources by very large amounts. 11,000% for nitrogen oxides, 14,000% for sulfur dioxide, 243% for VOCs, 97% for particulate matter, carcinogens by 742%.

Response 2: It is not possible for the IDEM to operate air quality monitoring stations in every community. Monitoring resources are focused on areas of high population or areas with large sources of air pollution. A copy of the most current Indiana Air Quality Network Evaluation is available on our website www.state.in.us/dem/oam/amb_review/review.html. Copies can also be obtained by contacting the Office of Air Management Ambient Monitoring Branch.

However, the OAM does collect air quality monitoring data from other areas that are

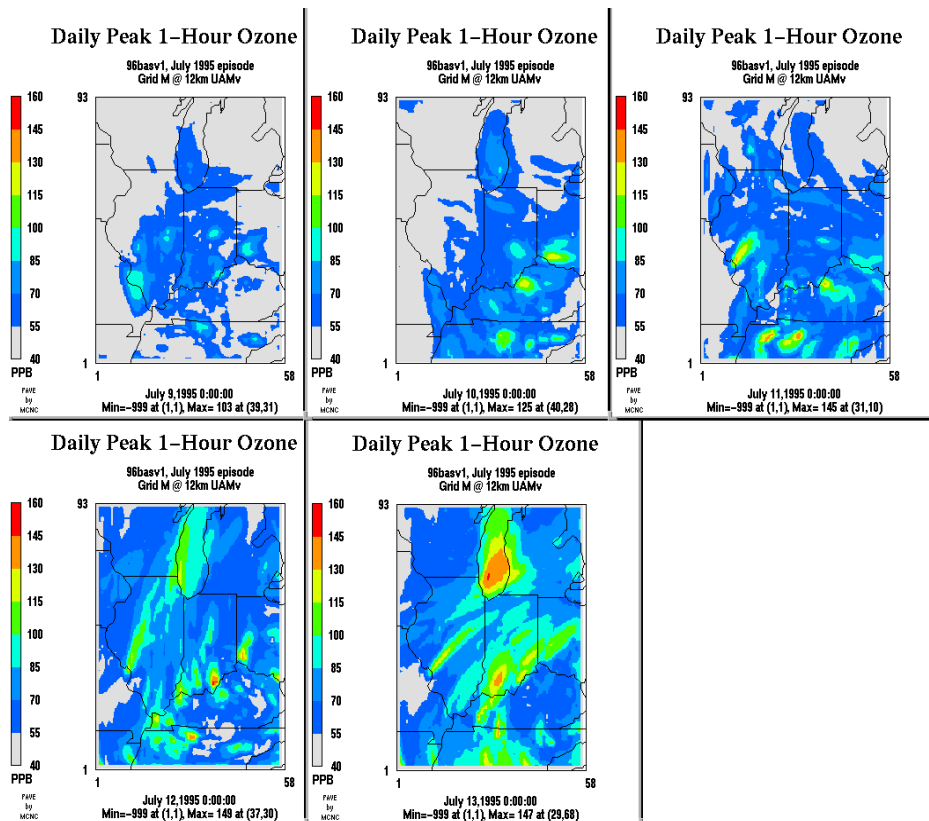
representative of air quality in southern Wells County. As has been pointed out in previous comments, there currently is not a large amount of industrial emissions in this area. Therefore, air quality in this area is very similar to other non-urbanized areas with little industrial emissions. Air quality data from these types of areas shows that air pollution levels will be below the health-based air quality standards with a far greater margin than the maximum increase in pollution levels that would be attributed to DPL.

Summaries of emissions inventories for Wells and other Counties are attached. In addition to emissions from industrial sources, these inventories include emissions from traffic (mobile) and from sources such as off road vehicles, farming, and household activities (area). The inventories also include emissions from natural sources of air pollution.

Below are the most representative monitoring readings for the site in micrograms per cubic meter ($\mu\text{g}/\text{m}^3$) or parts per billion (ppb) for ozone. The readings are taken from the last three years of available data (1997-1999) the annual readings are the highest from that period and the short-term readings are the average of the second-highest readings from each year.

<u>Pollutant</u>	<u>Averaging Period</u>	<u>Monitoring Site</u>	<u>City</u>	<u>Reading</u>
<u>CO</u>	<u>1-hour</u>	<u>Douglas St.</u>	<u>Fort Wayne</u>	<u>7595</u>
<u>CO</u>	<u>8-hour</u>	<u>Douglas St.</u>	<u>Fort Wayne</u>	<u>4809</u>
<u>SO₂</u>	<u>3-hour</u>	<u>National Guard</u>	<u>Richmond</u>	<u>254.1</u>
<u>SO₂</u>	<u>24-hour</u>	<u>National Guard</u>	<u>Richmond</u>	<u>76.0</u>
<u>SO₂</u>	<u>Annual</u>	<u>National Guard</u>	<u>Richmond</u>	<u>15.7</u>
<u>PM₁₀</u>	<u>24-hour</u>	<u>Beacon</u>	<u>Fort Wayne</u>	<u>48</u>
<u>PM₁₀</u>	<u>Annual</u>	<u>Beacon</u>	<u>Fort Wayne</u>	<u>24</u>
<u>Ozone</u>	<u>1-hour</u>	<u>Amstutz Rd.</u>	<u>Leo</u>	<u>100</u>
<u>NO₂</u>	<u>Annual</u>	<u>Children's Hosp.</u>	<u>South Bend</u>	<u>30.0</u>

The images, shown below, are the results of Urban Airshed Modeling (UAM) performed by the Lake Michigan Air Directors Consortium. (LADCO) This run is a computer simulation of the July 1995 episode using past emission inventories. From this you can see that the only sharp gradients in ozone concentrations are nearby large cities.



These grayscale reproductions of the UAM results are difficult to use. However, full color, images are available on the OAM website at www.state.in.us/idem/oam/programs/pad/index.html

The modeling does indicate that the air quality in Wells Co. is very similar to the monitoring data collected at the Roanoke site and that ozone concentrations are not nearer the ozone standard than those measured at the Leo site.

Comment 3: How many of these peaking power plants will IDEM going to approve before they stop one? How many can be built in the same county?

Response 3: If the applicant complies with all state and federal requirements and the air quality analysis demonstrates that the source will not have significant impact on the environment and human health, then the IDEM is required by law to issue the permit. If significant sources are located nearby, then the OAM takes that into account when performing the air quality demonstration.

Comment 4: So IDEM doesn't have a problem that DPL is proposing on building one about 15 miles away?

Response 4: The two projects have little cumulative air quality impact. A summary is provide below:

<u>Pollutant</u>	<u>Year</u>	<u>Time-Averaging Period</u>	<u>Montpelier Project's Maximum Modeled Impacts</u>	<u>Montpelier and Fairmount Impacts</u>	<u>Significant Impact Increments</u>
<u>CO</u>	<u>1990</u>	<u>1-hour</u>	<u>112.7</u>	<u>113.6</u>	<u>2000</u>
<u>CO</u>	<u>1994</u>	<u>8-hour</u>	<u>43.6</u>	<u>55.5</u>	<u>500</u>
<u>SO₂</u>	<u>1993</u>	<u>3-hour</u>	<u>13.9</u>	<u>13.9</u>	<u>25</u>
<u>SO₂</u>	<u>1993</u>	<u>24-hour</u>	<u>4.2</u>	<u>4.5</u>	<u>5</u>
<u>SO₂</u>	<u>1990</u>	<u>Annual</u>	<u>0.06</u>	<u>0.06</u>	<u>1</u>
<u>PM₁₀</u>	<u>1993</u>	<u>24-hour</u>	<u>2.02</u>	<u>2.16</u>	<u>5</u>
<u>PM₁₀</u>	<u>1990</u>	<u>Annual</u>	<u>0.07</u>	<u>0.07</u>	<u>1</u>
<u>NO₂</u>	<u>1990</u>	<u>Annual</u>	<u>0.03</u>	<u>0.05</u>	<u>1</u>

TABLE 5 - HAPS Analysis

<u>Hazardous Air Pollutants</u>	<u>HAP Emissions per Turbine</u>	<u>Maximum 8-hour concentrations</u>	<u>Maximum 8-hour concentrations with Fairmount</u>	<u>PEL</u>	<u>Percent of PEL</u>
	<u>(pounds/hr)</u>	<u>(ug/m3)</u>	<u>(ug/m3)</u>	<u>(ug/m3)</u>	<u>(%)</u>
<u>1,3 Butadiene</u>	<u>0.00006</u>	<u>0.003000</u>	<u>0.003047</u>	<u>2200000</u>	<u>0.0000001</u>
<u>1,4Dichlorobenzene</u>	<u>0.0000000070</u>	<u>0.000000</u>	<u>0.000000</u>	<u>450000</u>	<u>0.0000000</u>
<u>Acetaldehyde</u>	<u>0.00053</u>	<u>0.007500</u>	<u>0.007619</u>	<u>360000</u>	<u>0.0000021</u>
<u>Acrolein</u>	<u>0.00009</u>	<u>0.001210</u>	<u>0.001229</u>	<u>250</u>	<u>0.0004917</u>
<u>Arsenic</u>	<u>0.00003</u>	<u>0.001420</u>	<u>0.001443</u>	<u>10</u>	<u>0.0144254</u>
<u>Benzene</u>	<u>0.00017</u>	<u>0.010300</u>	<u>0.010463</u>	<u>3200</u>	<u>0.0003270</u>
<u>Beryllium</u>	<u>0.0000014</u>	<u>0.000059</u>	<u>0.000060</u>	<u>2</u>	<u>0.0030121</u>
<u>Cadmium</u>	<u>0.00001</u>	<u>0.000899</u>	<u>0.000913</u>	<u>5</u>	<u>0.0179800</u>
<u>Chromium</u>	<u>0.00003</u>	<u>0.002070</u>	<u>0.002103</u>	<u>500</u>	<u>0.0004206</u>
<u>Ethyl Benzene</u>	<u>0.00041</u>	<u>0.006010</u>	<u>0.006105</u>	<u>435000</u>	<u>0.0000014</u>
<u>Formaldehyde</u>	<u>0.00936</u>	<u>0.133000</u>	<u>0.135100</u>	<u>930</u>	<u>0.0145280</u>
<u>Hexane</u>	<u>0.00001</u>	<u>0.000008</u>	<u>0.000008</u>	<u>1800000</u>	<u>0.0000000</u>
<u>Lead</u>	<u>0.00004</u>	<u>0.002630</u>	<u>0.002671</u>	<u>50</u>	<u>0.0053435</u>
<u>Manganese</u>	<u>0.00244</u>	<u>0.148000</u>	<u>0.145035</u>	<u>5000</u>	<u>0.0030070</u>
<u>Mercury</u>	<u>0.000004</u>	<u>0.000227</u>	<u>0.000230</u>	<u>100</u>	<u>0.0002306</u>
<u>Napthalene</u>	<u>0.00011</u>	<u>0.006560</u>	<u>0.006664</u>	<u>50000</u>	<u>0.0000133</u>
<u>Nickel</u>	<u>0.00001</u>	<u>0.000860</u>	<u>0.000874</u>	<u>1000</u>	<u>0.0000874</u>
<u>PAH's</u>	<u>0.00013</u>	<u>0.007500</u>	<u>0.007619</u>	<u>a</u> <u>-</u>	<u>N/A</u>

<u>Propylene Oxide</u>	<u>0.00039</u>	<u>0.005440</u>	<u>0.005526</u>	<u>240000</u>	<u>0.0000023</u>
<u>Propylene</u>	<u>0.00001</u>	<u>0.000109</u>	<u>0.000111</u>	<u>350000</u>	<u>0.0000000</u>
<u>Selenium</u>	<u>0.00007</u>	<u>0.004690</u>	<u>0.004764</u>	<u>200</u>	<u>0.0023822</u>
<u>Toluene</u>	<u>0.00171</u>	<u>0.024400</u>	<u>0.024787</u>	<u>750000</u>	<u>0.0000034</u>
<u>Xylene</u>	<u>0.00034</u>	<u>0.004880</u>	<u>0.004957</u>	<u>435000</u>	<u>0.0000011</u>

Comment 5: So IDEM doesn't have any problem then, instead of building a major source, a major polluting source, what the companies are now choosing to do is to go after the minor sources and building a whole lot of 250-ton plants as opposed to one major plant and spreading it around more? That's an okay strategy for IDEM then?

Response 5: As long as the sources comply with the state and federal requirements and the air quality modeling shows that these sources are below the National Ambient Air Quality Standards and demonstrate that their emissions will not have a significant impact on the environment and human health.

Comment 6: And so my question is what is the measuring device that IDEM is using other than the law to say enough is enough on these things? And is there an example that IDEM has stopped one of these, and what would it take to stop one?

Response 6: The National Ambient Air Quality Standards (NAAQS) and the Prevention of Significant Deterioration (PSD) program's maximum allowable increases in pollutant concentrations are the primary measures that would limit the number or size of facilities that can be approved under the air pollution control rules. We use air quality models to determine the impact of a new source's emissions on the surrounding area. IDEM has not denied a permit, as of now, for one of these types of electric generating stations. The IDEM can only deny a permit if the source fails to demonstrate compliance with the law if the IDEM determines that the emissions will cause or significantly contribute to a violation of air quality standards.

Comment 7: Citizens have not had adequate representation or information regarding this project during the local approval process or the IURC hearings. When DPL first applied to the OAM for a permit on November 8, 1999, Indiana Code requires them to notify landowners by registered mail within 10 days. I don't believe that happened. In addition, the application was not placed in the local library. All the local approvals happened by December 23. Without the information contained in the air permit application, the local community got a very one-sided presentation. On March 21 and 22, 2000, the IDEM released its draft acid rain and construction permits. Copies of the application were not placed in the library until March 24. On June 7 DPL withdrew their application and resubmitted the application that is the subject of this hearing. The November application was illegal. On July 18 the IDEM released the draft permit that is the subject of this hearing. Citizens should have had the benefit of this information during the local approval process.

It's not clear that DPL properly notified all appropriate parties of the second application. I believe that the IDEM should contact landowners to verify whether they have been properly notified.

Response 7: Based on IC 13-15-8-2, not more than ten (10) working days after submitting an application for a permit issued under IC 13-15-1, the person that submitted the application for the permit shall make a reasonable effort to provide notice:

3. to all adjoining land owners of the land that is the subject of the permit

- application; or
4. to all occupants of the land that adjoins the land that is the subject of the permit application.

Such notice shall be in writing, include the date on which the application for the permit was submitted to the OAM and include a brief description of the subject of the application.

As required by 326 IAC 2-1.1-6(c) [General provisions: public notice] within ten (10) days of the submission of an application, **each applicant** shall place a copy of the permit application or operating permit revision application for public review at a library in the county where the construction or modification is proposed. **Each applicant** shall notify the commissioner of the location of the library where the copy of the application was placed. There are forms in the permit application that the applicant fills out that says they fulfilled those requirements. And the November '99 application indicated that they had fulfilled those requirements.

The OAM was not aware that they had not fulfilled that requirement until Mrs. Karen Grube notified the OAM at end of March that she had tried to locate a copy of the permit application and could not locate a copy. At that time, the OAM was processing the preliminary findings for public review and felt that extending the public comment period was adequate to compensate for the application not being placed in the library originally. This extended period would allow Mrs. Grube to have the opportunity to review the application for a greater period of time as she would have had if the application had been placed in the library when she first attempted to look at it. Subsequently in discussions with Dr. Rybarczyk and also with Mrs. Grube, several people attempted to have access to the permit application in the library. After receiving this information, the OAM began discussion with Dayton Power and Light (DPL) regarding their obligation to provide the permit application, and DPL decided to withdraw the application. The OAM determined that since DPL was going to go ahead and withdraw the permit, we would not deny the permit and end up possibly in litigation over how they fulfilled the requirement. On June 8, 2000, DPL withdrew permit application 11528 and submitted a new permit application 12321. The OAM then wrote a letter acknowledging the fact that DPL had withdrawn that application. This letter was sent to people who had expressed interest in this project either by phone or letter. On June 8, 2000, the OAM contacted the Wells County Public Library to confirm if the application had been received. It was confirmed by a library staff member that the application was received the afternoon of June 8, 2000.

Comment 8: Is it the responsibility of IDEM to check to make sure that the source places the application in the library and notifies the adjoining landowners?

Response 8: When an error is brought to IDEM's attention, IDEM does look into the matter to correct the situation. The Indiana statute (IC 13-15-8-2) places the obligation on the source to provide the notice and then they are required to sign an affidavit that they will abide by such statute requirements.

Comment 9: The HAPs emissions changed from permit application 11528 filed in November 1999 to permit application 12321 filed in June 2000. If the source did not change the proposed project from permit 11528 to permit 12321, then why did the HAPs emissions change?

Response 9: Since the public notice for the preliminary findings of 11528, the USEPA has revised and issued a final set of emission factors for stationary gas turbines that burn natural gas and/or oil. This final document was based on data from a number of sources within the OAQPS and from outside organizations. Emission test reports from various natural gas-

fired and oil-fired combustion turbines, were compiled by the Emission Factor Inventory Group. The Combustion Turbine Workgroup of the former EPA Industrial Combustion Coordinated Rule making (ICCR) submitted test reports for combustion turbines burning various fuels. Test reports were also gathered from the state of Wisconsin and the state of California. Section 3.1 of the AP-42 has been updated to incorporate this new available data. New information has been used to better characterize this source category and to develop improved criteria pollutant emission factors. The background report for the revised Section 3.1 can be located at www.epa.gov/ttn/chief.

The preliminary findings listed in permit 11528 were based on draft USEPA AP-42 emission factors. The following table lists the draft AP-42 emission factors that were proposed in the preliminary findings of 11528 as well as the current USEPA AP-42 emission factors used for the final calculations. The emission factors are listed below:

Emission Factors for Fuel Oil			Emission Factors for Natural Gas		
Pollutant	lbs/MMBtu		Pollutant	lbs/MMBtu	
	Previous	Current		Previous	Current
Acetaldehyde	2.52E-05	2.52E-05	1,3 Butadiene	4.310E-07	4.300E-07
Acrolein	7.88E-06	7.88E-06	Acetaldehyde	7.843E-05	4.000E-05
Antimony	2.20E-05	2.20E-05	Acrolein	7.745E-06	6.400E-06
Arsenic	4.90E-06	4.90E-06	Benzene	1.373E-04	1.200E-05
Benzene	7.76E-04	7.76E-04	Ethylbenzene	2.353E-05	3.200E-05
Beryllium	3.30E-07	3.30E-07	Formaldehyde	3.333E-03	7.100E-04
Cadmium	4.20E-06	4.20E-06	Napthalene	1.373E-04	----
Chromium	4.70E-05	4.70E-05	NDMA	2.250E-07	----
Cobalt	9.10E-06	9.10E-06	NMOR	2.250E-07	----
Formaldehyde	7.89E-05	7.89E-05	PAHs	1.765E-04	2.200E-06
Lead	5.80E-05	5.80E-05	Propylene Oxide	2.843E-05	2.900E-05
Manganese	2.30E-04	2.30E-04	Toluene	1.275E-04	1.300E-04
Mercury	9.10E-07	9.10E-07	TMA	1.670E-07	----
Napthalene	1.30E-04	1.30E-04	Xylene	2.647E-05	2.600E-05
Nickel	1.20E-03	1.20E-03			
Phosphorus	3.00E-04	3.00E-04			
POM	8.20E-05	8.20E-05			
Selenium	5.30E-06	5.30E-06			
Toluene	2.81E-04	2.81E-04			
Xylene	1.93E-04	1.93E-04			

Comment 10: Does IDEM know what is being emitted from these facilities? Has IDEM ever performed any testing? There is no information regarding cyanide and cyanogen compounds. Nickel emissions are now very low and manganese is now higher. You should have a very good handle on the emissions of trace metals since what goes in has to come out. How will you measure the HAP emissions?

Response 10: This information shows that hazardous air pollutants will be emitted in amounts that are well below the levels that trigger any specific regulatory authority. Any variability due to differing levels of metals contained in fuel oil will not affect those thresholds. When burning natural gas, formaldehyde is the HAP that will be emitted in the greatest quantity. To ensure that HAPs emissions are below the regulatory thresholds, the OAM has included an emission limit for formaldehyde. The permit requires DPL to test for formaldehyde. OAM permits for other similar facilities also include this testing requirement, but none of the facilities have been in operation long enough to have performed the test.

Comment 11: Has IDEM actually tested turbines such as these and actually taken information from them?

Response 11: There has been NOx RATA and CEMS certification performed at the Vermillion Electric Generating Station. However, the CEMS data is very limited at this point because the turbines did not operate that much this summer. In addition, that permit did not require testing for formaldehyde.

Comment 12: How is IDEM going to measure the HAPs coming and out of the facility?

Response 12: The permit does not require the direct monitoring of the HAPs emissions. The permit does require stack testing for formaldehyde. The EPA approved emission factors will provide the means of estimating future actual emissions. Based on the state rules, there are no provisions that would govern HAPs emissions at the levels that are allowed to be emitted from this plant..

Comment 13: What test are going to be run or will DPL run?

Response 13: The permit outlines the testing requirements under Condition D.1.7. Based on this condition, the Permittee shall conduct a performance test on the combustion turbines' exhaust stacks (designated as G1CT1S1 through G8CT2S2) in order to certify the continuous emission monitoring system for NOx and CO, shall conduct NOx and SO₂ stack tests and shall perform formaldehyde stack tests for each turbine when operating at loads of 50%, 75% and 100%

Comment 14: If IDEM is protecting public health, then why is this facility allowed to burn No. 2 fuel oil rather than No. 1 fuel oil as require in other IDEM permits for other facilities?

Response 14: The source can burn No. 2 fuel oil as long as it complies with the regulations established and poses not threat to human health as demonstrated in the air quality analysis. IDEM has not required any source to use one specific type of fuel for these new electric generating stations unless 326 IAC 2-2 (40 CFR PART 52.21) was applicable.

Comment 15: Going from permit No. 1 that DPL filed, their original plan was to burn 19 million gallons of diesel, have the opportunity to burn 19 million gallons of diesel in 27 days. By the time the second permit came down, that was cut down to be only 2.8 million. Why is it only a backup? And if there wasn't a problem with diesel, why was that cut?

Response 15: On February 21, 2000, Dayton Power and light submitted a custom schedule for 40 CFR Part 60, Subpart GG to Region V USEPA. The request contained an alternative

monitoring program to determine compliance with 40 CFR Part 60, Subpart GG. This request identified the Montpelier Electric Generating Station's units as acid rain affected units and proposed using the monitoring requirements of 40 CFR Part 75 in lieu of the requirements of 40 CFR Part 60, Subpart GG. Specifically, the Dayton Power and Light proposed the following:

1. Use of continuous emission monitors (CEMS) for nitrogen oxides (NO_x), in lieu of fuel monitoring requirements for nitrogen given at 40 CFR Part 60, Subpart GG.
2. Use of pipeline quality natural gas as the primary fuel for the turbines.
3. Use of emissions monitoring provisions pursuant to 40 CFR Part 75, in lieu of fuel sampling and analysis requirements for sulfur in fuel oil given at 40 CFR Part 60, Subpart GG.

The USEPA, Region V determined the following approvals regarding the Montpelier Electric Generating Station. The Acid Rain Program monitoring requirements may be used to demonstrate compliance with 40 CFR Part 60, Subpart GG. The approval was granted based on the following conditions:

1. The affected units are subject to 40 CFR Part 75 or required to continuously monitor for NO_x and SO₂ in accordance with 40 CFR Part 75.
2. The permitting authority has established federally enforceable emission limits on the exhaust gases which are equal to or more stringent than the limits for NO_x and SO₂ under Subpart GG.
3. The permitting authority has established federally enforceable limits on the sulfur content and amount of number 2 fuel oil which could be burned as a back-up provided DPL and the permitting agency clarify what is meant by the term "limited quantities".
4. The source must meet all of the applicable continuous emission monitoring requirements, as specified in 40 CFR Part 75. These requirements include, but are not limited to, those given at 40 CFR Part 75.10, 75.11 and 75.12.
5. The source must meet the requirements of 40 CFR Part 60.7(c) and 40 CFR Part 60.334(c).
6. The affected units burn only pipeline quality natural gas as the primary fuel.

This custom schedule was approved on March 24, 2000 by the USEPA, Region V.

IDEM and DPL established a fuel oil usage limitation of 2.8 million gallons per year and has been included in the permit as a condition.

Comment 16: So USEPA saw a problem with burning 19 million gallons of fuel oil, but IDEM did not?

Response 16: USEPA conditioned the custom schedule on a minimal use of oil, but would not have limited oil usage if DPL were to demonstrate compliance with Subpart GG using the methods outlined in 40 CFR Part 60.334.

Comment 17: The custom schedule approved by EPA allows for 40 Part 75 compliance monitoring in lieu of 40 CFR Part 60, Subpart GG monitoring. How does this differ from the monitoring of the 249 ton per year limit?

Response 17: The continuous emission monitoring systems measure pollutant concentration and air flow rate to provide pound per day emission rates used in the Acid Rain Deposition Control Program to enforce the ton per year limit. The concentrations are used to directly enforce the ug/m3 limits established in Subpart GG. This monitoring is based on 326 IAC 3-5. 326 IAC 3-5-2 outlines the minimum operating specifications for the continuous emission monitors. The performance specifications for both 326 IAC 3-5 and 40 CFR Part 75, are set forth in 40 CFR Part 60, Appendix B. However, since this project is an affected acid rain source, the requirements of 326 IAC 3-5-5 (Quality Assurance Requirements) default to the requirements of 40 CFR Part 75.

Comment 18: Where does IDEM take into account the safety of the trucks that deliver the oil and the emissions of the trucks when they are idling or unloading the fuel oil?

Response 18: The OAM has no jurisdiction on truck safety. There are no rules established which govern truck emissions when delivering and unloading the fuel oil.

Comment 19: There is no stipulation in the permit as to the water that will be consumed. So these will use water almost continuously, and it will be about 19 million gallons that will be consumed. That's an enormous amount of water. And Steve Loeschner brought up the fact that it actually is equal to the amount of fuel that's burned, and so it does have the same thermodynamic properties. It is actually a steam turbine, and I will come and testify to anybody you want me to testify to that effect, EPA or whatever. That is incorrect. It actually is a steam production, and the thermodynamics proves that it turns the turbines just as much as the fuel does. You can do the mole ratios and figure out the chemistry. But my point is if they're going to consume that amount of water, which is 19 million gallons of water, in 17 and a half days, that water apparently will come out of the ground. It will be groundwater. There is no recommendation, there is no even statement in your permit of how this water will be treated. That groundwater will have pesticides in it. It will have herbicides. It will have trace metals. It can be burned directly. How will you monitor that? If you do not monitor it, then they can burn the hard water, send that all up into the atmosphere, and now your pollution numbers change. If it is cleaned, how is it cleaned? How is it disposed of? Do they use ion exchange where they take the ions out and they replace them with other ions, which then become pollutants? I believe this needs to be addressed. It has not been found in any of the permits. If they use ion exchange, how are they doing it and how are they disposing of the material they are taking out?

Response 19: Water used for water injection is demineralized prior to use, a process that does not require any air permitting and would not have been included in the air permit to construct application. Water must be demineralized before it can be injected into the combustion. Otherwise, the minerals would be deposited on the turbine blades. To demineralize the water, portable filtering trucks are used. Water from the wells is sent to a raw water tank. From there it is pumped to the filtering trucks where the suspended solids are removed. The water will then be pumped to water storage tanks, ready for use in the water injection process. No waste is generated on-site. After the filtering capacity of the truck is exhausted, it is returned to the supplier for regeneration.

On regards to these units being steam generating units, please see Response #1 under Mr. Stephen Loeschner's section.

Comment 20: Why was the catalytic oxidation system, originally proposed by DPL to control carbon monoxide, removed from the 12321 permit? Why wasn't that kept in place as part of the requirement just to make air quality better?

Response 20: The OAM has no authority to require a catalytic oxidation system to control CO because

this source is limited to less than 250 tons per year and will not trigger a best available control technology review. Currently, there are no state rules that control CO if the emissions are less than 250 tons per year and the source is located in an attainment area. The source did not place this control in the permit application and based on the current rules, the OAM has no authority to require such control.

Comment 21: In regards to the USEPA NO_x program that's currently being debated in the Supreme Court, as the OAM stated that the such requirement reducing by about 120,000 tons per year of nitrogen oxides. I went ahead and added up the tonnage of nitrogen oxides if all of these plants, 33 of these plants are being proposed in Indiana are built, they would add another 22,000 tons per year on top of what we already have. And yet the EPA is mandating us to drop by 120,000 tons. Here the OAM is approving 22,000 new tons, and then Indiana going to have to drop 120,000 tons. That seems self-defeating.

Response 21: The end result of the new NO_x rule will be a cap over certain types of sources. DPL and other similar facilities will be regulated under the NO_x SIP call. These sources will have to fit within that cap, and it will not be an increase over what Indiana statewide emissions need to be to satisfy the standard. The new sources are going to have to find the emission credits or reduce their emissions in order to stay below the NO_x emission cap.

Comment 22: One of the other things that was real interesting on the draft permit, the OAM has been mentioning that the NO_x would be limited. It would be fairly low burning both natural gas and diesel. Now, since they put the restriction on the diesel -- and it's, of course, limited to 250 tons. Yet on page 20 of your 27 on your permit, it says, The total input of No. 2 fuel oil for the 16 turbines is limited to the 2.9 million gallons that I mentioned already. This usage limitation is equivalent to 116 tons of SO₂ per year and 392 tons of NO_x. How could it be 392 tons of NO_x when the limit's 250 and they've already cut the diesel down? The numbers don't make any sense.

Response 22: This is typographical error and has been corrected to as previously described on page 7 of this addendum.

Comment 23: If the air permit has been withdrawn, which DPL did on June 7th, does that mean that the acid rain permit has to be re-filed? Because the permit it was based on, the air permit, is no longer in place, and does that mean a new one has to be re-filed?

Response 23: The review process of the acid rain permit is based on federal requirements which is a separate review process than the new source construction and operating permit. Therefore, even though the new source construction and operating permit was re-filed. The acid rain requirements do not require that the acid rain permit be re-filed.

Comment 24: So IDEM could legally issue an acid rain permit without even knowing what the facility is emitting?

Response 24: Based on the federal rules established under 40 CFR Part 75, the acid rain permit could be issued without issuing a construction permit. These two programs are separate from each other. The acid rain permit does not establish a limit for the amount of sulfur dioxide emitted from the plant. It does require that these units obtain SO₂ allocations equal to or greater than what is emitted in any year.

Comment 25: Does the EPA law require that the source file the acid rain application two years prior to start of operation?

Response 25: 40 CFR Part 75 does require that the source submit an application two (2) years prior to startup. However, the USEPA determined not to enforce requirement for these types of

facilities.

Comment 26: Could citizens request them to enforce this law?

Response 26: Citizens could request the USEPA to enforce this part of the law. However, since EPA decided not to enforce this part of the law, Indiana developed a policy that requires that source must obtain an acid rain permit prior to startup of the operation.

Comment 27: Who at EPA should I contact to object to that?

Response 27: One could write to Mr. Francis X. Lyons, Regional Administrator.

Comment 28: How is the source going to monitor the amount of diesel fuel burned?

Response 28: The source will be required to maintain records of the amount of fuel oil burned during each month and report such usage on a quarterly basis. The source can only burn the amount and type of fuel which is permitted. The 2.8 million gallons of fuel oil represent approximately 100 hours of operation per year at full load. The requirements to maintain records and report usage in addition to IDEM inspections will ensure compliance with the fuel oil usage limitation.

Comment 29: Could the source burn waste oil as long as they met the sulfur dioxide and heat content?

Response 29: The source would have to require prior approval to burn any other types of fuels other than what is permitted.

Comment 30: How do they measure the No. 2 fuel oil?

Response 30: Fuel sampling and analysis data will be required to be collected pursuant to procedures specified in 326 IAC 3-7-4 for oil combustion, and these data may be used to determine compliance or noncompliance with the emission limitations contained in 326 IAC 7-1.1. The source will be required to analyze an oil sample to determine the sulfur content of the oil via the procedures in 40 CFR 60, Appendix A, Method 19.

Comment 31: Will IDEM require a complete profile of the heavy metal content of the fuel oil?

Response 31: Based on the state rules, IDEM has no authority to require a test that shows the complete profile of the heavy metal content of the fuel oil. Variation in metal content would not result in emissions above the regulatory thresholds of 10 tons per year of and single HAP or 25 tons per year of any combination of HAPs.

Comment 32: On page 4 and 5 of your draft permit, the limited PTE calculations show that the VOCs for natural gas are 14.48 tons per year, and natural gas is a very clean burning fuel. The VOCs for diesel are only 2.2 tons per year, and that's a very dirty burning fuel. How can there be less VOCs coming out of diesel exhaust than there is from natural gas exhaust? Chemically it doesn't compute.

Response 32: The fuel oil usage is limited to a very small amount as compared to the natural gas usage. The source can burn about four times the amount of natural gas than the fuel oil. In addition, the vendor data lists that the pounds per hour of VOC is slightly higher for gas than fuel oil. This data has been tested and verified by the vendor.

Comment 33: How is the source going to control the formaldehyde emission rate?

Response 33: Formaldehyde and other products of incomplete combustion are minimized by proper operation of the turbine generators. The required stack test will verify the emission rate

during the different operating scenarios (50, 75 and 100% load).

Comment 34: IDEM's own documents state that the 8-hour standard is being violated in the Indianapolis area as well as several other urbanized areas across the state. IDEM has no ozone monitoring sites between Emporia in Madison County and Roanoke in Huntington County. How can you know the cumulative effects of these plants along with upwind air coming into the county won't cause violations of the ozone standard in Wells County.

Response 34: The Reactive Plume Model that was used to predict the effect that DPL will have shows that little or no impact on local air quality. In the American Trucking Association case a federal court ruled that the 8-hour ozone standard cannot be enforced. We continue to perform activities to bring Lake, Porter, Clark and Floyd Counties into compliance with the one-hour standards and as part of the regional plan to bring the eastern U.S. into compliance. The results of that work indicate that the plan to achieve the one-hour standard, will ensure that ozone levels in northeast Indiana are below the 8-hour standard.

The results of the Urban Airshed Model used to support the state-wide ozone planning shows that air quality in Wells county complies with the one-hour standard.

Comment 35: Your modeling results shows that DPL will lower ozone concentrations. That tells me that there is a problem with the model. Your modeling for CinCap shows that it has a greater impact on air quality than Duke's proposed project in Delaware County even though it is a much smaller plant. Does reality mirror what these models predict?

Response 35: The immediate effect of NOx emissions depends on local conditions, including the ratio of VOC to nitrogen oxides in the atmosphere. In the Midwest those conditions typically result in a reaction involving ozone and nitrogen oxides that lowers ozone in the near term. In the longer term, increased NOx levels result in higher ozone concentrations building further downwind. The Urban Airshed Model confirms this phenomenon. This model has been validated across a large portion of the eastern U.S. and replicates peak ozone concentrations as they actually occur.

Comment 36: Under Part C - Ozone Impact Analysis, OAM Three-Tiered Ozone Reviewer, the document lists the NOx emission rate as 556 pounds per day. Shouldn't this be 5.75 tons per day.

Response 36: The 556 pound per day emission rate is incorrect. The Reactive Plume Modeling has been run with the correct 5.76 tons per day rate and the results (attached) still show that DPL will not cause or contribute to an ozone problem in Wells County.

The RPM has the correct emission rates for fuel oil usage.

Comment 37: The permit addresses source modifications. Will the public be notified of future modifications? Can they expand and burn more diesel, or would that require public notice? There is a pattern of plants expanding after their initial proposal and it doesn't seem that IDEM has the authority to stop any of them as long as they are within legal limit.

Response 37: Any physical changes or changes in the method of operation of the DPL facility will be subject to the air permitting rules. Expanding the plant by either adding turbines, or installing different turbines than listed in the permit, as well as burning more or different fuel, require a modification of the permit. Modifications of sources that have permits are not subject to the requirement for that applicant to notify adjoining landowners at the time of application. Changes that result in emission increases of more than 25 tons are

generally subject to public notice with opportunity for a public hearing prior to a final decision. The IDEM is required to provide notice of all final decision to persons who have identified themselves as interested parties. The IDEM's authority to deny permits is limited by law as previously discussed.

Additional comments were presented at the hearing which do not directly relate to the OAM's review of the air permit application. Although the OAM does not have legal authority to address these issues in the air permit, we acknowledge these comments and concerns and have attempted to respond when possible. In some cases local government or another state agency or local may be able to provide additional information.

The following comments were raised by more than one person, and have been grouped together and summarized:

Comment 1: What is the role of the Indiana Utility Regulatory Commission with regard to DPL's proposed plant, and what actions has the IURC taken?

Response 1: The Indiana Utility Regulatory Commission (IURC) oversees more than 700 utilities operating in Indiana. The IURC is required by state statute to make decisions that balance the interests of all parties to ensure that the utilities provide adequate and reliable service at reasonable prices. The IURC evaluates the need for additional electrical capacity. Merchant power plants are required to have either an approval from the IURC or a determination that they are exempt from IURC regulations prior to operating.

On August 9, 2000, the IURC issued a final order declining to exercise its jurisdiction over DPL's proposed construction, ownership and operation in connection with the proposed plant. A copy of the IURC order is attached. For further information regarding this determination, please contact Michael Leppert with the IURC at 1-800-851-4268.

The Indiana Office of Utility Consumer Counselor represents the public interest before the IURC, and may be contacted at 888/441-2494.

Comment 2: The proposed plant may cause local wells to go dry due to high water usage.

Response 2: The Indiana Department of Natural Resources (DNR) has a statutory role regarding water usage issues. Domestic well owners are protected against the impacts of high capacity pumpage in accordance with Indiana Code 14-25-4: the Water Rights Emergency Regulation (copy attached). For further information, please contact Mark Basch, with the DNR Division of Water, at 877-928-3755.

Comment 3: There were numerous comments regarding the location of the proposed facility. Some of the specific concerns related to a possible reduction in property values; the proximity to a school, and the use of farmland for this type of facility.

Response 3: IDEM does not have the legal authority to address the siting of the facility our review of air permit applications. The previously mentioned IURC Order affirms the authority of local officials to address the siting of this facility.

The National Ambient Air Quality Standards (NAAQS) established by law require IDEM to assure that the facility meets stringent requirements to satisfy established health-based standards. These statewide air quality standards are set to be protective of children's health; the standards are set so that facilities located near a school would not have an adverse affect on air quality.

Comment 4: Indiana needs a comprehensive power plant siting law.

Response 4: That would require a change to state law. The Indiana General Assembly's Regulatory Flexibility Committee has been studying the topic of energy issues and merchant power plants.

IDEM will closely follow legislation which may be introduced regarding merchant power plants. In the event that new laws are passed which affect IDEM's authority or role regarding the regulation of these types of plans, IDEM will review permit applications from these types of facilities in accordance with the new laws.

Comment 5: Several people asked about a possible tax abatement for DPL.

Response 5: IDEM does not have any regulatory authority regarding tax abatements, and is not aware of state assistance for any merchant power plant proposed or constructed in Indiana. The Business Development Division of the Indiana Department of Commerce works to provide incentives, technical and site selection assistance to expanding businesses already located in the state or to companies relocating to the state. For further information, please contact Mr. Bob Murphy, Director of the Business Development Division of the Indiana Department of Commerce, at 317/232-0159.

Comment 6: Indiana needs a plan regarding energy policy.

Response 6: IDEM, the Indiana Department of Commerce and other state agencies are working together to find ways to promote cleaner energy. There are a number of economic incentives for the use of renewable energy technologies in Indiana. The Indiana Department of Commerce, through its Alternative Power & Energy program, offers grants of up to \$10,000 to help businesses and institutions install wind, solar, hydro, biomass, and geothermal systems. Indiana also offers a property tax exemption to homeowners who install wind, solar, and geothermal systems. For further information, please contact Phil Powlick with the Department of Commerce at 317/232-8970.

Numerous other comments and concerns, many related to quality of life issues, were raised at the public hearing. OAM recognizes these are important to those who expressed them; however, they do not have a direct impact on how the Office of Air Management reviews and makes decisions on air permit applications. OAM's permit review by law cannot address issues for which it does not have direct regulatory authority.

A full transcript of the public hearing is also part of the record of this permit decision and can be obtained by phoning the Office of Air Management at (317) 233-0178. It is also available on IDEM's website at:

<http://www.state.in.us/idem/oam/permits/powerplt/summary/transdplm.pdf>.

Air Quality Analysis

Introduction

Dayton Energy (DPL) has applied for a permit to construct and operate a power facility near Poneto in Wells County, Indiana. The site is located at Universal Transverse Mercator (UTM) coordinates 642830 East and 4497823 North. The proposed power facility would consist of 16 high-efficiency combustion turbines, rated at 25 megawatts (MW) per turbine, a space heater of 0.1 MMBTU/hour and one 1 MMBTU/hour emergency fire pump. Wells County is designated as attainment for the National Ambient Air Quality Standards. These standards for NO₂, SO₂, CO and PM₁₀ are set by U.S. EPA to protect the public health and welfare.

The permit application was received by the Office of Air Management (OAM) on November 8, 1999. This document provides OAM's Air Quality Modeling Section's review of the permit application including an air quality analysis performed by the OAM. This permit was reviewed for air quality as if it were a Prevention of Significant Deterioration (PSD) permit.

Air Quality Analysis Objectives

The OAM review of the air quality impact analysis portion of the permit application will accomplish the following objectives:

- A. Establish which pollutants require an air quality analysis based on the source's emissions.
- B. Determine the ambient air concentrations of the source's emissions and provide analysis of actual stack height with respect to Good Engineering Practice (GEP).
- C. Demonstrate that the source will not cause or contribute to a violation of the National Ambient Air Quality Standard (NAAQS) or Prevention of Significant Deterioration (PSD) increment.
- D. Perform an analysis of any air toxic compound for the health risk factor on the general population.
- E. Perform a brief qualitative analysis of the source's impact on general growth, soils, vegetation and visibility in the impact area with emphasis on any Class I areas. The nearest Class I area is Kentucky's Mammoth Cave National Park which is 380 kilometers from the proposed power facility site in Wells County, Indiana.

Summary

Dayton Energy has applied for a construction permit to construct and operate a merchant power facility, near Poneto in Wells County, Indiana. The application was prepared by Optim Environmental, Inc. of Cincinnati, Ohio. Wells County is currently designated as attainment for all criteria pollutants. Nitrogen Dioxide (NO₂) and Carbon Monoxide (CO) emission rates associated with the proposed power facility exceeded their respective significant emission rates. An air quality modeling analysis has been conducted for all criteria pollutants including Sulfur Dioxide (SO₂) and Particulate Matter less than 10 microns (PM₁₀) even though these pollutants were below significant emission rates. This was done to ensure all air quality standards would be maintained by the new facility. Modeling results taken from the Industrial Source Complex Short Term (ISCST3) model showed that for all pollutants but NO₂ impacts were predicted to be less than the significant impact increments and significant monitoring de minimus levels. The NO₂ increments and air quality standards were found to be maintained. OAM conducted Hazardous Air Pollutant (HAPs) modeling and all HAP 8-hour maximum concentrations modeled below 0.5% of each Permissible Exposure Limit (PEL). There was no impact review conducted for the nearest Class I area, which is Mammoth Cave National Park in Kentucky, due to the modeled concentrations from the source falling below significant impact increments. An additional impact analysis on the surrounding area was conducted and showed no significant impact on economic growth, soils, vegetation, federal and state endangered species or visibility from the proposed facility.

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Part A - Pollutants Analyzed for Air Quality Impact

Indiana Administrative Codes (326 IAC 2-2) PSD requirements apply in attainment and unclassifiable areas and require an air quality impact analysis of each regulated pollutant emitted in significant amounts by a new major stationary source or modification. Significant emission levels for each pollutant are defined in 326 IAC 2-2-1. CO, NO₂, SO₂, VOC (ozone) and PM₁₀ will be emitted from Dayton Energy and an air quality analysis is required for CO, NO₂, SO₂ and PM₁₀ which exceeded their significant emission rates as shown in Table 1.

TABLE 1 - Dayton's Emission Rates (tons/yr)		
<u>Pollutant</u>	<u>Maximum Allowable Emissions</u>	<u>Significant Emission Rate</u>
CO	249.6	100.0
NO ₂	103.3	40.0
SO ₂	11.8	40.0
PM ₁₀	7.0	15.0
VOC	14.6	40.0

Significant emission rates are established to determine whether a source is required to conduct an air quality analysis. If a source exceeds the significant emission rate for a pollutant, air dispersion modeling is required for that specific pollutant. A modeling analysis for each pollutant is conducted to determine whether the source modeled concentrations would exceed significant impact increments. Modeled concentrations below significant impact increments are not required to conduct further air quality modeling. Modeled concentrations exceeding the significant impact increment would be required to conduct more refined modeling which would include source inventories and background data.

Part B - Significant Impact Analysis

An air quality analysis, including air dispersion modeling, was performed to determine the maximum concentrations of the source emissions on receptors outside of the facility property lines. Long-term (annual) worst-case determinations were based on the permit limits of operation per year using natural gas or diesel-firings. Stack parameters were based on peak-summer demand conditions.

Model Description

The Office of Air Management review used the Industrial Source Complex Short Term (ISCST3) model, Version 3, dated June 4, 1999 to determine maximum off-property concentrations or impacts for each pollutant. All regulatory default options were utilized in the United States Environmental Protection Agency (U.S. EPA) approved model, as listed in the 40 Code of Federal Register Part 51, Appendix W "Guideline on Air Quality Models". The model also utilized the Schulman-Scire algorithm to account for building downwash effects. Stacks associated with the proposed merchant power facility are below the Good Engineering Practice (GEP) formula for stack heights. This indicates that wind flow over and around surrounding buildings can influence the dispersion of pollutant coming from the stacks. 326 IAC 1-7-3 requires a study to demonstrate that excessive modeled concentrations will not result from stacks with heights less than the GEP stack height formula. These aerodynamic downwash parameters were calculated using U.S. EPA's Building Profile Input Program (BPIP).

Meteorological Data

The meteorological data used in the ISCST3 model consisted of surface data from the Fort

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Wayne National Weather Service station merged with the mixing heights from Dayton, Ohio Airport National Weather Service Station for the five-year period (1990-1994). The 1990-1994 meteorological data was purchased through the National Oceanic and Atmospheric Administration (NOAA) and National Climatic Data Center (NCDC) and preprocessed into ISCST3 format with an updated version of U.S. EPA's PCRAMMET program.

Modeled Results

Maximum modeled concentrations for each pollutant over its significant emission rate are listed below in Table 3 and are compared to each pollutant's significant impact increment for Class II areas, as specified by U.S. EPA.

TABLE 3 - Summary of OAM's Significant Impact Analysis (ug/m3)					
Pollutant	Year	Time-Averaging Period	Dayton Maximum Modeled Impacts	Significant Impact Increments	Significant Monitoring Increments
CO	1990	1-hour	112.7	2000.0	^a
CO	1990	8-hour	43.6	500.0	575
SO ₂	1993	3-hour	13.9	25.0	^a
SO ₂	1993	24-hour	4.2	5.0	13.0
SO ₂	1990	Annual	0.06	1.0	^a
PM ₁₀	1993	24-hour	2.02	5.0	10.0
PM ₁₀	1990	Annual	0.07	1.0	^a
NO ₂	1990	Annual	0.03	1.0	14.0

^a No limit exists for this time-averaged period

All modeled concentrations for each pollutant at all applicable time-averaged periods were below both the significant impact increment and significant monitoring de minimus levels. No significant short-term or long-term health impacts are expected as a result of the proposed facility and no further refined air quality analysis is required as well as no pre-construction monitoring requirements.

Particulate Matter less than 2.5 micron

EPA issued a new National Ambient Air Quality Standards for Particulate Matter less than 2.5 microns (PM_{2.5}) on July 17, 1997. Due to a legal challenge to the new standard, however U.S. EPA has released specific guidance stating that states should continue to analyze PM₁₀ impacts for all New Source Review. There are 3 primary origins of PM_{2.5}: 1) primary particulates in the solid state, 2) condensable particulates and 3) secondary particulates formed through atmospheric reactions of gaseous precursor emissions. There will be a five-year scientific review of this standard which includes installation of PM_{2.5} monitors throughout the state to better define background concentrations and gather source specific information. EPA is expected to release a new dispersion model to better predict PM_{2.5} concentrations. There are no assumed ratio of PM_{2.5} to PM₁₀ at this time. As more information becomes available, a more detailed analysis of PM_{2.5} can be conducted.

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Part C - Ozone Impact Analysis

Ozone formation tends to occur in hot, sunny weather when NO_x and VOC emissions photochemically react to form ozone. Many factors such as light winds, hot temperatures and sunlight are necessary for higher ozone production. The results of the wind rose analysis and the puff transport model show that any potential plume emitted from the facility would fall out to the northeast and relatively close to the facility.

OAM Three-Tiered Ozone Review

OAM incorporates a three-tiered approach in evaluating ozone impacts from a single source. The first step is to determine how NO_x and VOC emissions from the new source compare to area-wide NO_x and VOC emissions. Results from this analysis show Dayton's limited NO_x emissions of 5.75 tons/day would comprise 3.3% of the area-wide NO_x emissions from point, area, onroad and nonroad mobile source and biogenic emissions. Dayton's 1,632 pounds/day of VOC emissions would comprise much less than 1% of the area-wide VOC emissions from the different emission sources listed above.

A second step is to review historical monitored data to determine ozone trends for an area and the applicable monitored value assigned to an area for designation determinations. This value is known as the design value for an area. The nearest ozone monitors within this region are the downwind monitors in Allen County, one monitor at 2022 North Beacon which is located 32 kilometers (20 miles) north of the site and Leo High School monitor, located 60 kilometers (37 miles) north northeast of the site. The design value for the 2022 North Beacon monitor is 99 ppb and for the Leo High School monitor, the design value is 101 ppb for the 1-hour ozone standard. Wind rose analysis indicates that prevailing winds in the area occur from the southwest and west-southwest during the summer months of May through September when ozone formation is most likely to occur. Ozone impacts from the Dayton proposed facility would likely fall north, northeast and east northeast of the facility, generally towards the existing ozone monitors in the region.

A third step in evaluating the ozone impacts from a single source is to estimate the source's individual impact through a screening procedure. The Reactive Plume Model-IV (RPM-IV) has been utilized in the past to attempt to determine 1-hour ozone impacts from single VOC/NO_x source emissions. However, the lack of supporting documentation and availability of meteorological data and ambient background concentrations makes this methodology extremely difficult to utilize and results can be suspect. The model is unable to simulate all meteorological and chemistry conditions present during an ozone episode (period of days when ozone concentrations are high). Modeling for 1 hour ozone concentrations was conducted for June 6, 1995 (a high ozone day) to compare the results to the ozone National Ambient Air Quality Standard (NAAQS) limit. The maximum cell concentration for each time and distance specified was used to compare to the ambient ozone mode. OAM modeling results assumed the short-term emission rates of NO₂ and VOCs and are shown in Appendix C. The impact (difference between the plume-injected and ambient modes) from Dayton Energy was 0.0 ppb or negative throughout the plume development. All ambient plus plume-injected modes were below the NAAQS limit for ozone at every time period and every distance. No modeled 1-hour NAAQS violations of ozone occurred.

Urban Airshed Model (UAM) analysis for regional ozone transport has been conducted by OAM as well as states surrounding Lake Michigan and various national organizations. UAM is regarded as a regional modeling tool used to develop ozone attainment demonstrations and determine NO_x and VOC emission controls for a region. Transport of ozone and ozone-forming pollutants from upwind areas is evident and likely contribute to increased ozone concentrations in Wells County. Previous experience with this model has shown that the amount of additional NO_x and VOC emission from Dayton Energy, which are a tiny fractions of the pollutants regionally, would not noticeably increase the ozone concentrations in the area.

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From this three-tiered approach, ozone formation is a regional issue and the emissions from Dayton Energy will represent a small fraction of NO_x and VOC emissions in the area. Ozone contribution from Dayton Energy emissions is expected to be minimal. Ozone historical data shows that the area monitors have design values below the ozone NAAQS of 120 ppb and the Dayton Energy ozone impact based on the emissions and modeling will have minimal impact on ozone concentrations in the area.

Part E - Hazardous Air Pollutant Analysis and Results

OAM presently requests data concerning the emission of 188 Hazardous Air Pollutants (HAPs) listed in the 1990 Clean Air Act Amendments which are either carcinogenic or otherwise considered toxic and may be used by industries in the State of Indiana. These substances are listed as air toxic compounds on the State of Indiana, Department of Environmental Management, Office of Air Management's construction permit application Form Y. Any one HAP over 10 tons/year or all HAPs with total emissions over 25 tons/year will be subject to toxic modeling analysis. The modeled emissions for each HAP are the total emissions, based over 8760 hours per year. The resulting concentrations from the limited HAP emission are less than the total HAP emissions, based on permitted limits of operation over a year. For conservative purposes, the total emissions were modeled and the maximum concentrations were used.

OAM performed HAP modeling using the ISCST3 model for all HAPs. Maximum 8-hour concentrations were determined and the concentrations were recorded as a percentage of each HAP Permissible Exposure Limit (PEL). The PELs were established by the Occupational Safety and Health Administration (OSHA). In Table 4 below, the results of the HAP analysis with the emission rates, modeled concentrations and the percentages of the PEL for each HAP are listed. All HAPs concentrations were modeled below 0.5% of their respective PELs. The 0.5% of the PEL represents a safety factor of 200 taken into account when determining the health risk of the general population.

TABLE 5 - HAPS Analysis					
<u>Hazardous Air Pollutants</u>	<u>HAP Emissions per Turbine</u>	<u>Limited HAP Emissions Plantwide</u>	<u>Maximum 8-hour concentrations</u>	<u>PEL</u>	<u>Percent of PEL</u>
	(pounds/hr)	(tons/year)	(ug/m3)	(ug/m3)	(%)
1,3 Butadiene	0.00006	0.0004	0.003000	2200000	0.0000001
1,4 Dichlorobenzene	0.000000007	0.000001	0.000000	450000	0.0000000
Acetaldehyde	0.00053	0.0060	0.007500	360000	0.0000021
Acrolein	0.00009	0.0060	0.001210	250	0.0004840
Arsenic	0.00003	0.0020	0.001420	10	0.0142000
Benzene	0.00017	0.0120	0.010300	3200	0.0003219
Beryllium	0.0000014	0.0001	0.000059	2	0.0029650
Cadmium	0.00001	0.0010	0.000899	5	0.0179800
Chromium	0.00003	0.0020	0.002070	500	0.0004140
Ethyl Benzene	0.00041	0.0290	0.006010	435000	0.0000014
Formaldehyde	0.00936	0.6560	0.133000	930	0.0143011
Hexane	0.00001	0.0008	0.000008	1800000	0.0000000

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Lead	0.00004	0.0030	0.002630	50	0.0052600
Manganese	0.00244	0.1710	0.148000	5000	0.0029600
Mercury	0.000004	0.0003	0.000227	100	0.0002270
Napthalene	0.00011	0.0080	0.006560	50000	0.0000131
Nickel	0.00001	0.0010	0.000860	1000	0.0000860
PAH's	0.00013	0.0090	0.007500	^a	N/A
Propylene Oxide	0.00039	0.0270	0.005440	240000	0.0000023
Propylene	0.00001	0.0006	0.000109	350000	0.0000000
Selenium	0.00007	0.0050	0.004690	200	0.0023450
Toluene	0.00171	0.1200	0.024400	750000	0.0000033
Xylene	0.00034	0.0240	0.004880	435000	0.0000011

^a No OSHA PEL for 8-hour exposure exists at this time

Part F - Additional Impact Analysis

PSD regulations require additional impact analysis be conducted to show that impacts associated with the facility would not adversely affect the surrounding area. An analysis on economic growth, soils, vegetation and visibility and is listed below.

Economic Growth and Impact of Construction Analysis

A construction workforce of more than 100 is expected and Dayton Energy will be completely automated once the facility is operational. Secondary emissions of unpaved roads have been modeled. Industrial and residential growth is predicted to have negligible impact in the area since it will be dispersed over a large area and new home construction is not expected to increase. Any commercial growth, as a result of the proposed merchant power facility, is not expected to occur. A minimal number of support facilities will be needed. There will be no adverse impact in the area due to industrial, residential or commercial growth.

Soils Analysis

Secondary NAAQS limits were established to protect general welfare which includes soils, vegetation, animals and crops. Soil types in Wells County are predominately Blount, Morley, Napanee Pewamo association. The general landscape consists of Tipton Till Plain or flat to gently rolling terrain (1816 - 1966 Natural Features of Indiana - Indiana Academy of Science). According to the low modeled PM10 concentrations and the insignificant modeled concentrations CO, NO₂, and SO₂ along with the HAPs analysis, the soils will not be adversely affected by the proposed merchant power facility.

Vegetation Analysis

Due to the agricultural nature of the land, vegetation in the Wells County area consists mainly of crops such as corn, wheat, oats, soybeans and hay. The maximum modeled concentrations of the proposed merchant power facility for CO, NO₂, SO₂ and PM₁₀ are well below the threshold limits necessary to have adverse impacts on surrounding vegetation (Flora of Indiana - Charles Deam). Federally endangered or threatened plants as listed in the U.S. Fish and Wildlife Service, Division of Endangered Species for Indiana list two threatened and one endangered species of plants. The endangered plant is found along the sand dunes in northern Indiana while the two threatened species do not thrive on cultivated or grazing land. Trees in the area are considered hardy trees and due to the

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insignificant modeled concentrations, no significant adverse impacts are expected.

Federal and State Endangered Species Analysis

Federally endangered or threatened species as listed in the U.S. Fish and Wildlife Service , Division of Endangered Species for Indiana include 12 species of mussels, 4 species of birds, 2 species of bat and butterflies and 1 specie of snake. The mussels and birds listed are commonly found along major rivers and lakes while the bats are found near caves. The proposed site will not adversely impact these habitats. The agricultural nature of the land overall has disturbed the habitats of the butterflies and snake and the proposed facility is not expected to impact the area further. The state of Indiana's list of endangered, special concern and extirpated nongame species, as listed in the Department of Natural Resources, Division of Fish and Wildlife, contains species of birds, amphibians, fish, mammals, mollusks and reptiles which may be found in the area of Dayton's proposed facility. However, the impacts are not expected to have any additional adverse effects on the habitats of the species than what has already occurred from the agricultural activity in the area.

Additional Analysis Conclusions

The nearest Class I area to the proposed merchant power facility is the Mammoth Cave National Park located approximately 380 km to the south in Kentucky. Operation of the proposed merchant power facility will not adversely affect the visibility at this Class I area. The results of the additional impact analysis conclude the Dayton Energy's proposed merchant power facility will have no adverse impact on economic growth, soils, vegetation, endangered or threatened species or visibility on any Class I area.

Table 6 - RPM-IV Modeling for Dayton Energy				
NAAQS Analysis for Ozone (June 6, 1995)				
<u>Time</u>	<u>Distance</u>	<u>Ambient</u>	<u>Plume-Injected</u>	<u>Source Impact</u>
(hours)	(meters)	(ppb)	(ppb)	(ppb)
700.0	100	43	43	0
800.0	6540	52.1	46.7	-5.4
900.0	13100.0	63.3	60.3	-3.0
1000.0	19500.0	75.8	73.6	-2.2
1100.0	26500.0	89.2	86.9	-2.3
1200.0	36300.0	99.4	98.2	-1.2
1300.0	48500.0	106	105	-1.2
1400.0	60500.0	111	109	-2.1
1500.0	73700.0	114	111	-2.8
1600.0	88100.0	115	112	-3.3
1700.0	102000.0	116	112	-3.7
1800.0	115000.0	116	112	-3.9
1900.0	125000.0	116	112	-4.0

Indiana Department of Environmental Management Office of Air Management

Technical Support Document (TSD) for a New Source Construction and Minor Source Operating Permit

Source Background and Description

Source Name: Montpelier Electric Generating Station
Source Location: 8265 South 450 West, Poneto, Indiana 46781
County: Wells
SIC Code: 4911
Operation Permit No.: 179-12321-00026
Permit Reviewer: Nysa L. James

The Office of Air Management (OAM) has reviewed an application from DPL Energy, Inc. relating to the construction and operation of an electric generating station.

Permitted Emission Units and Pollution Control Equipment

The source consists of the following permitted emission units and pollution control devices:

- (a) Eight (8) Twin Pac combustion turbine generator units, consisting of sixteen (16) simple cycle turbines and eight (8) generators, which each generator is directly connected to two (2) combustion turbines. The generators are designated as units G1 through G8, and the two (2) combustion turbines, which are directly connected to each generator, are designated as CT1 and CT2. The sixteen (16) combustion turbines have an anticipated maximum heat input capacity of 270.9 MMBTU/hr (Lower Heating Value, LHV) per turbine unit, a maximum nominal output of 25 MW per turbine, with water-injection for NO_x emissions control, and exhaust to sixteen (16) stacks designated as G1CT1S1 through G8CT2S2.
- (b) Natural gas-fired space heating equipment, with a maximum heat input capacity of 0.1 MMBtu/hr and exhausts to the atmosphere.
- (c) One (1) diesel-fire emergency fire pump, with a maximum heat input capacity of 1.0 MMBtu/hr and exhausts to the atmosphere.
- (d) One (1) fuel oil storage tank, with a maximum storage capacity of 400, 000 gallons, a maximum volume of 55,418 ft³ and vents to the atmosphere.

Stack Summary

Stack ID	Operation	Height (feet)	Diameter (feet)	Flow Rate (acfm)	Temperature (°F)
G1CT1S1	Turbine No. 1 to Generator No. 1	60	9.5	419,377	887
G1CT2S2	Turbine No. 2 to Generator No. 1	60	9.5	419,377	887

G2CT1S1	Turbine No. 1 to Generator No. 2	60	9.5	419,377	887
G2CT2S2	Turbine No. 2 to Generator No. 2	60	9.5	419,377	887
G3CT1S1	Turbine No. 1 to Generator No. 3	60	9.5	419,377	887
G3CT2S2	Turbine No. 2 to Generator No.3	60	9.5	419,377	887
G4CT1S1	Turbine No. 1 to Generator No.4	60	9.5	419,377	887
G4CT2S2	Turbine No. 2 to Generator No. 4	60	9.5	419,377	887
G5CT1S1	Turbine No. 1 to Generator No. 5	60	9.5	419,377	887
G5CT2S2	Turbine No. 2 to Generator No. 5	60	9.5	419,377	887
G6CT1S1	Turbine No.1 to Generator No. 6	60	9.5	419,377	887
G6CT2S2	Turbine No. 2 to Generator No. 6	60	9.5	419,377	887
G7CT1S1	Turbine No.1 to Generator No. 7	60	9.5	419,377	887
G7CT2S2	Turbine No. 2 to Generator No. 7	60	9.5	419,377	887
G8CT1S1	Turbine No. 1 to Generator No. 8	60	9.5	419,377	887
G8CT2S2	Turbine No. 2 to Generator No. 8	60	9.5	419,377	887

Recommendation

The staff recommends to the Commissioner that the construction and operation be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

An application for the purposes of this review was received on June 7, 2000.

Emission Calculations

See Appendix A (Emissions Calculation Spreadsheets for the fire pump, heating equipment, unpaved roads and hazardous air pollutants) for detailed calculations (five (5) pages).

The Hazardous Air Pollutants (HAPs) emission calculations are based on the final AP-42 (Section 3.1 Stationary Gas Turbines, 4/00) emission factors for organic and metal HAPs (Appendix A, pages 1 and 2 of 5).

Emissions for the turbines are based on the worst case operating conditions (information supplied by the Pratt and Whitney vendor). Compliance shall be demonstrated by use of a continuous emissions monitoring system for CO and NOx.

The VOC emissions from the storage tank are considered negligible by the Office of Air Management. Therefore, these negligible VOC emissions have no significant impact on

maintaining the source's VOC emissions below the 250 tons per year threshold, since the limited VOC PTE is 14.57 tons per year without such negligible emissions.

Potential To Emit of the sixteen (16) Combustion Turbines -

NOx potential to emit - Worst case emissions are based on using fuel oil (at 100% load and 51°F) at all times

- 47.0 pounds of NOx per hour per turbine * 8760 hours per year * -
ton/2000 pounds = 205.86 tons per year per turbine.
- 205.86 tons per year per turbine * 16 (total number of turbines) = **3293.76 tons per year.**

CO potential to emit - Worst case emissions are based on using natural gas (at 75% load and 31°F) at all times.

- 73.15 pounds of CO per hour per turbine * 8760 hours per year * -
ton/2000 pounds = 320.40 tons per year per turbine.
- 320.40 tons per year per turbine * 16 (total number of turbines) = **5126.35 tons per year.**

SO₂ potential to emit - Worst case emissions are based on using fuel oil (at 100% load and 51°F) at all times

- 15.0 pounds of SO₂ per hour per turbine * 8760 hours per year * ton/2000
pounds = 65.7 tons per year per turbine.
- 65.7 tons per year per turbine * 16 (total number of turbines) = **1051.2 tons per year.**

VOC potential to emit - Worst case emissions are based on using natural gas (at 75% load and 30°F) at all times

- 4.25 pounds of VOC per hour per turbine * 8760 hours per year *
ton/2000 pounds = 18.62 tons per year per turbine.
- 18.62 tons per year per turbine * 16 (total number of turbines) = **297.84 tons per year.**

PM/PM₁₀ potential to emit - Worst case emissions are based on using fuel oil (at 100% load and 51°F) at all times

- 7.0 pounds of PM/PM₁₀ per hour per turbine * 8760 hours per year
* ton/2000 pounds = 30.66 tons per year per turbine.
- 30.66 tons per year per turbine * 16 (total number of turbines) =
490.56 tons per year.

Total Potential To Emit -

NOx = 3293.76 ton/yr (turbine) + 0.044 ton/yr (heating equipment) + 19.3 ton/yr (fire pump) =
3313.1 ton/yr;

SO₂ = 1051.2 ton/yr (turbine) + 0.00 ton/yr (heating equipment) + 1.3 ton/yr (fire pump) = 1052.5 ton/yr;

CO = 5126.35 ton/yr (turbine) + 0.037 ton/yr (heating equipment) + 4.2 ton/yr (fire pump) =
5130.6 ton/yr

PM₁₀ = 490.56 ton/yr (turbine) + 0.003 ton/yr (heating equipment) + 1.4 ton/yr (fire pump) + 0.07 ton/yr (unpaved roads) = 492.03 ton/yr;

PM = 490.56 ton/yr (turbine) + 0.003 ton/yr (heating equipment) + 1.4 ton/yr (fire pump) + 0.257 ton/yr (unpaved roads) = 492.22 ton/yr; and

VOC = 297.84 ton/yr (turbine) + 0.002 ton/yr (heating equipment) + 1.6 ton/yr (fire pump) =
299.44 ton/yr.

Based on vendor information, emissions during startup and shutdown cycles will not exceed the maximum pounds per hour rates during "normal operations". Therefore, the above listed emission rates of the turbines represent worst case emission rates at any load and temperature during operation of the units.

Based on the potential to emit, all criteria pollutants are subject to PSD review. However, the source has decided to limit the emissions in order to maintain a minor source status. The limited potential to emit of the combustion turbines, natural gas-fired heating equipment, unpaved roads and diesel-fired engine is based on determining the highest pollutant emission rate when burning fuel oil and natural gas. In this case, NO_x has the highest emission rate of all criteria pollutants when burning fuel oil. Therefore, by limiting the NO_x emissions below 250 tons per year, the other criteria pollutants initially subject to PSD will also be less than 250 tons per year. When burning natural gas, CO has the highest emission rate of all criteria pollutants. By limiting the CO emissions below 250 tons per year, the other criteria pollutants initially subject to PSD will also be less than 250 tons per year.

Limited PTE Calculations -

1. When burning natural gas (CO is the highest pollutant emitted):

CO potential to emit when burning natural gas - 5126.35 tons per year
Worst case emission rate for CO is equal to 73.15 pounds per hour per unit.

Limited CO - $73.15 \text{ lb/hr/unit} \times 16 \text{ (total units)} = 1170.4 \text{ lb/hr};$
 $- 1170.40 \text{ lb/hr} \times 426 \text{ hr/yr} \times \text{ton}/2000 \text{ lb} = \mathbf{249.3 \text{ tons per year.}}$

Based on the CO limited potential to emit based on using natural gas, the following limited emissions are determined:

NO_x = $29.96 \text{ lb/hr/unit} \times 16 \text{ (total units)} = 479.36 \text{ lb/hr};$
 $= 479.36 \text{ lb/hr} \times 426 \text{ hr/yr} \times \text{ton}/2000 \text{ lb};$
 $= \mathbf{102.1 \text{ tons per year.}}$

SO₂ = $0.19 \text{ lb/hr/unit} \times 16 \text{ (total units)} = 3.02 \text{ lb/hr};$
 $= 3.02 \text{ lb/hr} \times 426 \text{ hr/yr} \times \text{ton}/2000 \text{ lb};$
 $= \mathbf{0.64 \text{ tons per year.}}$

PM/PM₁₀ = $2.0 \text{ lb/hr/unit} \times 16 \text{ (total units)} = 32.0 \text{ lb/hr};$
 $= 32.0 \text{ lb/hr} \times 426 \text{ hr/yr} \times \text{ton}/2000 \text{ lb};$
 $= \mathbf{6.82 \text{ tons per year.}}$

VOC = $4.25 \text{ lb/hr/unit} \times 16 \text{ (total units)} = 68.0 \text{ lb/hr};$
 $= 68.0 \text{ lb/hr} \times 426 \text{ hr/yr} \times \text{ton}/2000 \text{ lb};$
 $= \mathbf{14.48 \text{ tons per year.}}$

2. When burning fuel oil (NO_x is the highest pollutant emitted) (based on custom schedule for 40 CFR Part 60 Subpart GG, oil must be back-up fuel source. Therefore the usage is limited such that it is equivalent to 100 hours per year):

NO_x potential to emit when burning fuel oil - 3293.76 tons per year
Worst case emission rate for NO_x is equal to 47.0 pounds per hour per unit.
Limited NO_x - $47.0 \text{ lb/hr/unit} \times 16 \text{ (total units)} = 752.0 \text{ lb/hr};$
 $- 752.0 \text{ lb/hr} \times 100 \text{ hr/yr (calculated based on applicant's maximum tons per year)} \times \text{ton}/2000 \text{ lb} = \mathbf{37.6 \text{ tons per year.}}$

Based on the NO_x limited potential to emit based on using fuel oil, the following limited emissions are determined:

SO₂ = $14.7 \text{ lb/hr/unit} \times 16 \text{ (total units)} = 235.19 \text{ lb/hr};$

$$= 235.19 \text{ lb/hr} * 100 \text{ hr/yr} * \text{ton}/2000 \text{ lb};$$

$$= \mathbf{11.76 \text{ tons per year.}}$$

$$\text{PM}/\text{PM}_{10} = 7.0 \text{ lb/hr/unit} * 16 \text{ (total units)} = 112.0 \text{ lb/hr};$$

$$= 112.0 \text{ lb/hr} * 100 \text{ hr/yr} * \text{ton}/2000 \text{ lb};$$

$$= \mathbf{5.6 \text{ tons per year.}}$$

$$\text{VOC} = 2.75 \text{ lb/hr/unit} * 16 \text{ (total units)} = 44.0 \text{ lb/hr};$$

$$= 44.0 \text{ lb/hr} * 100 \text{ hr/yr} * \text{ton}/2000 \text{ lb};$$

$$= \mathbf{2.2 \text{ tons per year.}}$$

$$\text{CO} = 33.0 \text{ lb/hr/unit} * 16 \text{ (total units)} = 528 \text{ lb/hr};$$

$$= 528 \text{ lb/hr} * 100 \text{ hr/yr} * \text{ton}/2000 \text{ lb};$$

$$= \mathbf{26.4 \text{ tons per year.}}$$

3. Worst case limited PTE:

$$\text{NO}_x = 102.1 \text{ ton/yr (turbine burning natural gas)} + 0.044 \text{ ton/yr (heater)} + 1.103 \text{ ton/yr (fire pump)}$$

$$= \mathbf{103.3 \text{ ton/yr;}}$$

$$\text{SO}_2 = 11.76 \text{ ton/yr (turbine burning fuel oil)} + 0.00 \text{ (heater)} + 0.073 \text{ ton/yr (fire pump)} = \mathbf{11.83 \text{ ton/yr;}}$$

$$\text{CO} = 249.3 \text{ ton/yr (turbine burning natural gas)} + 0.037 \text{ ton/yr (heater)} + 0.238 \text{ ton/yr (fire pump)}$$

$$= \mathbf{249.6 \text{ ton/yr;}}$$

$$\text{PM}_{10} = 6.82 \text{ ton/yr (turbine burning natural gas)} + 0.003 \text{ ton/yr (heater)} + 0.078 \text{ ton/yr (fire pump)} +$$

$$0.070 \text{ ton/yr (unpaved roads)} = \mathbf{6.97 \text{ ton/yr;}}$$

$$\text{PM} = 6.82 \text{ ton/yr (turbine burning natural gas)} + 0.003 \text{ ton/yr (heater)} + 0.078 \text{ ton/yr (fire pump)} +$$

$$0.257 \text{ ton/yr (unpaved roads)} = \mathbf{7.16 \text{ ton/yr; and}}$$

$$\text{VOC} = 14.48 \text{ ton/yr (turbine burning natural gas)} + 0.002 \text{ ton/yr (heater)} + 0.09 \text{ ton/yr (fire pump)}$$

$$= \mathbf{14.57 \text{ ton/yr.}}$$

**** Please Note:** The permit application reflects a higher value for the hours of operation when burning natural gas, than what is determined above. In order to maintain a minor source status, the source must maintain all criteria pollutant emissions below 250 tons per year. The equivalent hours of operation are calculated above to reflect an estimate of the hours of operation, not a limitation on hours. Therefore, the source is required to maintain the emission limitations established in this permit. However, the hours of operation can fluctuate above or below what is determined above as long as the emissions are maintained below 250 tons per year.

Potential To Emit

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as “the maximum capacity of a stationary source or emissions unit to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA, the department, or the appropriate local air pollution control agency.”

Pollutant	Potential To Emit (tons/year)
PM	492.22
PM-10	492.03
SO ₂	1052.5
VOC	299.44
CO	5130.6
NO _x	3313.1

HAP's	Potential To Emit (tons/year)
1,3 Butadiene	0.304
Acetaldehyde	0.759
Acrolein	0.122
Arsenic	0.144
Benzene	1.044
Beryllium	0.006
Cadmium	0.091
Chromium	0.209
Dichlorobenzene	5.26E-07
Ethyl benzene	0.608
Formaldehyde	13.48
Hexane	7.88E-04
Lead	0.266
Manganese	14.99
Mercury	0.023
Naphthalene*	0.664
Nickel	0.087
PAHs	0.759
Propylene Oxide	0.551
Propylene	0.011
Selenium	0.475
Toluene	2.468
Xylene	0.494
TOTAL	37.47

* Naphthalene is considered a PAH, therefore these emissions are not counted towards the total HAPs' emissions since such emissions are accounted for under PAH emissions.

- (a) The potential to emit (as defined in 326 IAC 2-7-1(29)) of CO, NO_x, PM₁₀, SO₂ and VOC are equal to or greater than 100 tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-7.
- (b) The potential to emit (as defined in 326 IAC 2-7-1(29)) of any single HAP is equal to or greater than ten (10) tons per year and the potential to emit (as defined in 326 IAC 2-7-1(29)) of a combination HAPs is greater than or equal to twenty-five (25) tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-7. However, the limited potential to emit of a single HAP is less than ten (10) tons per year and the limited potential to emit of the combination of HAPs is less than twenty-five (25) tons per year, respectively. Therefore, 326 IAC 2-1-3.4 (New Source Toxics Rule) does not apply.
- (c) **Fugitive Emissions**
Since this type of operation is not one of the twenty-eight (28) listed source categories under 326 IAC 2-2 and since there are no applicable New Source Performance Standards for particulate matter (PM) that were in effect on August 7, 1980, the fugitive particulate matter (PM) emissions are not counted toward determination of PSD and Emission Offset applicability.

Actual Emissions

No previous emission data has been received from the source because this is a new source.

Limited Potential to Emit

The table below summarizes the total potential to emit, reflecting all limits, of the significant emission units (fugitive PM and PM₁₀ emissions are not counted towards the limited PTE).

	Limited Potential to Emit (tons/year)							
Process/facility	PM	PM-10	SO ₂	VOC	CO	NO _x	Formaldehyde	Manganese
Heating Equipment	0.003	0.003	0.000	0.002	0.037	0.044	3.29E-05	1.66E-07
Fire pump	0.078	0.078	0.073	0.090	0.238	1.103	2.95E-04	0.00
Unpaved Roads	0.257	0.070	0.00	0.00	0.00	0.00	0.00	0.00
Sixteen (16) turbines**	6.82	6.82	11.76	14.48	249.3	102.1	0.656	0.171
Total Emissions	7.16	6.97	11.83	14.57	249.6	103.2	0.656	0.171

* Formaldehyde and Manganese are the worst case single HAPs emitted based on the potential to emit calculations.

** Unpaved roads PM and PM₁₀ emissions are considered fugitive emissions and are not counted towards PSD applicability.

County Attainment Status

The source is located in Wells County.

Pollutant	Status
PM-10	attainment
SO ₂	attainment
NO ₂	attainment
Ozone	attainment
CO	attainment
Lead	attainment

- (a) Volatile organic compounds (VOC) and oxides of nitrogen (NO_x) are precursors for the formation of ozone. Therefore, VOC emissions are considered when evaluating the rule applicability relating to the ozone standards. Wells County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NO_x emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.
- (b) Wells County has been classified as attainment or unclassifiable for SO₂, PM₁₀ and CO. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.
- (c) Fugitive Emissions
Since this type of operation is not one of the twenty-eight (28) listed source categories under 326 IAC 2-2 and since there are no applicable New Source Performance Standards for particulate matter (PM) that were in effect on August 7, 1980, the fugitive particulate matter (PM) emissions are not counted toward determination of PSD and Emission Offset applicability.

Source Status

New Source PSD Definition (emissions after controls, based on 8,760 hours of operation per year at rated capacity **and/ or** as otherwise limited):

Pollutant	Emissions (ton/yr)
PM	7.16
PM10	6.97
SO ₂	11.83
VOC	14.57
CO	249.6
NO _x	103.2

HAP's	Emissions (tons/year)
1,3 Butadiene	0.004
Acetaldehyde	0.037
Acrolein	0.006
Arsenic	0.002
Benzene	0.012
Beryllium	1.0E-04
Cadmium	0.001
Chromium	0.002
Dichlorobenzene	5.26E-07
Ethyl benzene	0.029
Formaldehyde	0.656
Hexane	7.88E-04
Lead	0.003
Manganese	0.171
Mercury	3.0E-04
Naphthalene*	0.008
Nickel	0.001
PAHs	0.009
Propylene	6.45E-04
Propylene Oxide	0.027
Selenium	0.005
Toluene	0.120
Xylene	0.024
TOTAL	1.11

* Naphthalene is considered a PAH, therefore these emissions are not counted towards the total HAPs' emissions since such emissions are accounted for under PAH emissions.

- (a) This new source is **not** a major stationary source because no attainment pollutant is emitted at a rate of 250 tons per year or greater and it is not in one of the 28 listed source categories. Therefore, pursuant to 326 IAC 2-2, and 40 CFR 52.21, the PSD requirements do not apply.

Part 70 Permit Determination

326 IAC 2-7 (Part 70 Permit Program)

This new source is subject to the Part 70 Permit requirements because the potential to emit (PTE) of:

- (a) at least one of the criteria pollutant is greater than or equal to 100 tons per year,
- (b) a single hazardous air pollutant (HAP) is greater than or equal to 10 tons per year, or
- (c) any combination of HAPs is greater than or equal to 25 tons/year.

This new source shall apply for a Part 70 (Title V) operating permit within twelve (12) months after this source becomes subject to Title V.

Federal Rule Applicability

- (a) 40 CFR 60, Subpart GG (Stationary Gas Turbines):
The sixteen (16) combustion turbines are subject to 40 CFR Part 60, Subpart GG, because the heat input at peak load is equal to or greater than 10.7 gigajoules per hour, based on the lower heating value of the fuel fired.

Pursuant to 326 IAC 12-1 and 40 CFR 60, Subpart GG (Stationary Gas Turbines), the Permittee shall:

- (1) limit nitrogen oxides emissions, as required by 40 CFR 60.332, to:

$$\text{STD} = 0.0075 \frac{(14.4)}{Y} + F,$$

where STD = allowable NO_x emissions (percent by volume at 15 percent oxygen on a dry basis).

Y = manufacturer's rated heat rate at manufacturer's rated load (kilojoules per watt hour) or, actual measured heat rate based on lower heating value of fuel as measured at actual peak load for the facility. The value of Y shall not exceed 14.4 kilojoules per watt hour.

F = NO_x emission allowance for fuel-bound nitrogen as defined in paragraph (a)(3) of 40 CFR 60.332.

- (2) limit sulfur dioxide emissions, as required by 40 CFR 60.333, to 0.015 percent by volume at 15 percent oxygen on a dry basis, or use natural gas fuel with a sulfur content less than or equal to 0.8 percent by weight;
- (3) install a continuous monitoring system to monitor and record the fuel consumption and the ratio of water to fuel being fired in the turbine, as required by 40 CFR 60.334(a)
- (4) On March 24, 2000, the Montpelier Electric Generating Station was issued a custom schedule for Subpart GG by the USEPA, Region V. The custom schedule is as follows:
- (i) Use of natural gas as the primary fuel for the combustion turbines;
- (ii) Shall use number 2 fuel oil as a back-up fuel source only. The source shall take a total gallons per year limit on the diesel fuel. The limitation is as follows:
- The total input of the number 2 fuel oil to the sixteen (16) combustion turbines shall be limited to 2,899.85 kilo-gallons per twelve consecutive month period, rolled on a monthly basis. This usage limitation is equivalent to 116.0 tons of SO₂ per year and 392.0 tons of NO_x per year; and
- (iii) Continuously monitor the SO₂ and NO_x per the requirements of 40 CFR Part 75. These requirements include, but are not limited to 40 CFR Parts 75.10, 75.11 and 75.12.
- (5) report periods of excess emissions, as required by 40 CFR 334(c).
- (b) 40 CFR Part 60, Subpart Kb (Volatile Organic Storage Vessels):
The source's one (1) tank is subject to 40 CFR Part 60, Subpart Kb because the maximum capacity is greater than 40 m³ and is used to store volatile organic liquids (including petroleum) for which construction, reconstruction, or modification commenced after July 23, 1984.

This tank is exempt from the General Provisions (Part 60, subpart A) and from the provisions of this subpart because the tanks have a capacity greater than or equal to 151 m³, storing liquid with a maximum true vapor pressure less than 3.5 kPa.

Pursuant to 40 CFR Part 60, Subpart Kb, the Permittee shall:

- (1) maintain the records of the volatile organic liquid (VOL) stored;
 - (2) the period of storage;
 - (3) the maximum true vapor pressure of the volatile organic liquid (VOL) during the respective storage period;
 - (4) shall keep readily accessible records showing the dimension of the storage vessel and an analysis showing the capacity of the storage vessel;
 - (5) shall notify the Administrator within 30 days when the maximum true vapor pressure of the liquid exceeds the respective maximum true vapor pressure values for each volume range. (Available data on the storage temperature may be used to determine the maximum vapor pressure as determined in 40 CFR Part 60.117b(e)(1)-(3))
- (c) This source is subject to the requirements of 40 CFR Part 72-80 (Acid Rain Program). The requirements of this program shall be detailed in the Phase II, Acid Rain Permit.
- (d) There are no other New Source Performance Standards (326 IAC 12) and 40 CFR Part 60 applicable to this facility.
- (e) There are no NESHAP 40 CFR Part 63 applicable to this facility.

State Rule Applicability - Entire Source

326 IAC 1-6-3 (Preventive Maintenance):

- (a) The Permittee shall prepare and maintain Preventive Maintenance Plans (PMP) within ninety (90) days after commencement of operation, including the following information on each:
 - (1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission units;
 - (2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions;
 - (3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.
- (b) The Permittee shall implement the Preventive Maintenance Plans as necessary to ensure that lack of proper maintenance does not cause or contribute to a violation of any limitation on emissions or potential to emit.
- (c) PMP's shall be submitted to IDEM and OAM upon request and shall be subject to review and approval by IDEM and OAM.

326 IAC 1-7 (Stack Height Provisions):

Stacks designated as criteria pollutants are subject to the requirements of 326 IAC 1-7 (Stack Height Provisions) because the potential emissions which exhaust through stacks G1CT1S1 - G8CT2S2, are greater than 25 tons per year of PM . This rule requires that the stack be constructed using Good Engineering Practice (GEP), unless field studies or other methods of modeling show to the satisfaction of IDEM that no excessive ground level concentrations, due to less than adequate stack height, will result.

326 IAC 2.4-1.1 (New Source Toxics Control):

- (a) The formaldehyde potential to emit shall be less than ten (10) tons per twelve (12) consecutive month period, rolled on a monthly basis.
- (b) The manganese potential to emit shall be less than ten (10) tons per twelve (12) consecutive month period, rolled on a monthly basis.
- (b) The combination of HAPs shall be less than twenty-five (25) tons per twelve (12) consecutive month period, rolled on a monthly basis.

Therefore, the requirements of 326 IAC 2-4.1-1 (New Source Toxics Control) do not apply. Since NOx and CO are the limiting pollutants of this source, the NOx and CO limits established in the permit are sufficient to demonstrate compliance with the formaldehyde, manganese and the combination of HAPs limits established above.

326 IAC 2-2 (Prevention of Significant Deterioration):

- (a) The potential to emit of NOx and CO from the sixteen (16) combustion turbines, natural gas heating equipment and one (1) diesel engine shall be limited to less than 250 tons per twelve (12) consecutive months per pollutant, rolled on a monthly basis. Therefore, the Prevention of Significant Deterioration (PSD) rules, 326 IAC 2-2 and 40 CFR 52.21, will not apply. By limiting NOx and CO emissions to less than 250 tons per year, the SO₂, PM, PM₁₀ and VOC emissions are also less than 250 tons per year.
- (b) The NOx and CO emissions shall be limited by the following equation:
 - (1) NO_x emissions (tons per year) = Emissions from combustion turbines (tons per year, based on CEMs data) + natural gas usage from heating equipment (MMCF/yr) * appropriate AP-42 emission factor + fuel oil usage from engine (kgals/yr) * appropriate AP-42 emission factor.
 - (2) CO emissions (tons per year) = Emissions from combustion turbines (tons per year, based on CEMs data) + natural gas usage from heating equipment (MMCF/yr) * appropriate AP-42 emission factor + fuel oil usage from engine (kgals/yr) * appropriate AP-42 emission factor.
- (c) The source shall be required to install a continuous emissions monitoring system in accordance with 326 IAC 3-5, to demonstrate compliance with the above mentioned NOx and CO limits.
- (d) If the Permittee ever elects to relax the potential to emit limitation such that the PSD rules apply, the Permittee would be required, at a minimum, to install a control which would meet the value considered BACT at this time or install add-on controls which would meet the BACT value. For example, the Permittee is installing turbines that have been guaranteed by the vendor to meet a NOx emission rate of 25 ppm, but permits for similar units have recently been permitted with BACT value set at 9 ppm. Therefore, at a minimum, the Permittee would be required to meet the most current BACT value for similar sources as determined on a case by case basis.
- (e) The sulfur content of the fuel oil shall not exceed 0.05 percent by weight.

326 IAC 2-6 (Emission Reporting):

This source is subject to 326 IAC 2-6 (Emission Reporting), because it has the potential to emit more than one hundred (100) tons per year of NO_x, SO₂, CO, VOC and PM₁₀. Pursuant to this rule, the owner/operator of the source must annually submit an emission statement for the source. The annual statement must be received by July 1 of each year and contain the minimum requirement as specified in 326 IAC 2-6-4. The submittal should cover the period defined in 326 IAC 2-6-2(8)(Emission Statement Operating Year).

326 IAC 3-5 (Continuous Monitoring of Emissions):

- (a) Pursuant to 326 IAC 3-5-1(d)(1), the owner or operator of a new source with an emission limitation or permit requirement established under 326 IAC 2-5.1-3 and 2-6.1 shall be required to install, calibrate, certify, operate and maintain a continuous monitoring system for measuring NO_x and CO emissions rates in pounds per hour from the sixteen (16) stacks in accordance with 326 IAC 3-5-2 and 326 IAC 3-5-3.
- (b) The Permittee shall submit to IDEM, OAM, within ninety (90) days after monitor installation, a complete written continuous monitoring standard operating procedure (SOP), in accordance with the requirements of 326 IAC 3-5-4.
- (c) The Permittee shall record the output of the system and shall perform the required record keeping, pursuant to 326 IAC 3-5-6, and reporting, pursuant to 326 IAC 3-5-7.
- (d) In instances of downtime, the source shall use EPA's AP-42 emission factors for stationary gas turbines, to demonstrate compliance with the CO emission limit and use the Missing Data Substitution Procedures outlined in 40 CFR Part 75, Subpart D to demonstrate compliance with the NO_x emission limit, both established under Condition D.1.1.
- (e) The source may submit to OAM alternative emission factors based on the source's CEMS data, to use in lieu of the AP-42 emission factors in instances of downtime. The alternative emissions factors must be approved by OAM prior to use in calculating emissions for the limitations established in this construction permit. The alternative emission factors shall be based upon collected monitoring and test data supplied from an approved continuous emission monitoring system and/or approved performance tests. In the event that the information submitted does not contain sufficient data to establish appropriate emission factors, the source shall continue to collect data until appropriate emission factors can be established. During this period of time, the source shall continue to use AP-42 emission factors for CO and the NO_x Missing Data Substitution Procedures specified in 40 CFR Part 75, Subpart D, in periods of downtime.

This condition shall determine continuous compliance with the NO_x and CO emission limits established in this permit to avoid 326 IAC 2-2.

326 IAC 5-1 (Opacity Limitations)

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:

- (a) Opacity shall not exceed an average of forty percent (40%) any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
- (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A. Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

326 IAC 6-2 does not apply to the turbines, heating equipment, and fire-water pump engine because the units are not utilized for indirect heating.

326 IAC 6-4 (Fugitive Dust Emissions)

Pursuant to 326 IAC 6-4 (Fugitive Dust Emissions), the Permittee shall be in violation of 326 IAC 6-4 (Fugitive Dust Emissions) if any of the criteria specified in 326 IAC 6-4-2(1) through (4) are violated. Observations of visible emissions crossing the property line of the source at or near ground level must be made by a qualified representative of IDEM. [326 IAC 6-4-5(c)].

326 IAC 6-5 (Fugitive Particulate Matter Emission Limitations)

Pursuant to 326 IAC 6-5 (Fugitive Particulate Matter Emissions Limitations), fugitive particulate matter emissions shall be controlled according to the plan submitted on February 16, 2000.

- (a) This plan consists of wet suppression of dust from roads on an as needed basis.

No other 326 IAC 6 rules apply.

326 IAC 7-1.1-1 (Sulfur Dioxide Emission Limitations):

- (a) Pursuant to 326 IAC 7-1.1-2, sulfur dioxide emissions from fuel combustion facilities shall be limited to five-tenths (0.5) pounds per million Btu for distillate oil combustion.
- (b) Pursuant to 326 IAC 7-2-1, owners or operators of sources or facilities subject to 326 IAC 7-1.2, shall submit to the Commissioner the following reports based on fuel sampling and analysis data in accordance with procedures specified under 326 IAC 3-3:
 - (1) Shall submit reports of calendar month average sulfur content, heat content, fuel consumption, and sulfur dioxide emission rate in pounds per million Btus upon request.
- (c) Pursuant to 326 IAC 7-2-1, the Permittee shall demonstrate that the fuel oil sulfur content does not exceed 0.5 pounds per million Btus by:
 - (1) Fuel sampling and analysis data shall be collected pursuant to procedures specified in 326 IAC 3-7-4 for oil combustion, and these data may be used to determine compliance or noncompliance with the emission limitations contained in 326 IAC 7-1.1. Computation of calculated sulfur dioxide emission rates from fuel sampling and analysis data shall be based on AP-42 emission factors, unless other emission factors based on site specific sulfur dioxide measurements are approved by the commissioner and the USEPA. Fuel sampling and analysis data shall be collected as follows:
 - (a) compliance or noncompliance shall be determined by using a calendar month average sulfur dioxide emission rate in pounds per million Btus unless a shorter averaging time or alternate methodology is specified under 326 IAC 7-2. Analyzing the oil sample to determine the sulfur content of the oil via the procedures in 40 CFR 60, Appendix A, Method 19.
 - (i) Oil samples may be collected from the fuel tank immediately after the fuel tank is filled and before any oil is combusted; and
 - (ii) If a partially empty fuel tank is refilled, a new sample and analysis would be required upon filling
 - (2) Compliance or noncompliance with the emission limitation specified in 326 IAC 7-1.1 may be determined by conducting a stack test for sulfur dioxide emissions

from the sixteen (16) combustion turbines, using 40 CFR 60, Appendix A, Method 6, 6A, 6C, or 8, in accordance with the procedures in 326 IAC 3-6.

- (3) Upon written notification of a facility owner or operator to the department, continuous emission monitoring data collected and reported pursuant to 326 IAC 3-5 may be used as the means for determining compliance.

A determination of noncompliance pursuant to either of the methods specified in (1), (2) or (3) above shall not be refuted by evidence of compliance pursuant to the other method.

326 IAC 8-1-6 (New facilities; general reduction requirements):

Pursuant to 326 IAC 8-1-6 (New facilities; general reduction requirements), the requirements of BACT do not apply because the limited potential to emit of VOC of each turbine is less than 25 tons per year per unit. Based on the NOx emission limit, the limited VOC emissions are less than 25 tons per year per turbine. Compliance with the NOx emission limit will demonstrated by the use of a continuous emissions monitoring system.

No other 326 IAC 8 rules apply.

326 IAC 9 (Carbon Monoxide Emission Limits):

Pursuant to 326 IAC 9 (Carbon Monoxide Emission Limits), the source is subject to this rule because it is a stationary source which emits CO emissions and commenced operation after March 21, 1972. Under this rule, there is not a specific emission limit because the source is not an operation listed under 326 IAC 9-1-2.

326 IAC 10 (Nitrogen Oxides) does not apply to the source because it is not located in the specified counties (Clark and Floyd) listed under 326 IAC 10-1-1.

Conclusion

The construction and operation of this electric generating station shall be subject to the conditions of the attached proposed New Source Construction and Minor Source Operating Permit 179-12321-00026.

Appendix A: Emissions Calculations
HAPs Emissions for distillate oil-fired turbines

Company Name: Montpelier Electric Generating Station
Address, City IN Zip: 8265 South 450 West, Poneto, IN 46781
CP: 179-12321
Plt ID: 179-00026
Reviewer: NLJ
Date: 06-07-2000
Sixteen (16) combustion turbines @ 270.9 mmBtu/hr each
Heat Input Capacity: 4334.4 MMBtu/hr

Pollutant	Emission Factor (lbs/MMBtu)	Total Emissions (tons/yr)	Emissions Per Turbine (tons/yr)	Total Limited Emissions (tons/yr)	Limited Emissions Per Turbine (tons/yr)
1,3 Butadiene	1.6000E-05	0.304	0.019	0.0035	0.0002
Arsenic	1.10E-05	0.209	0.013	0.0024	0.0001
Benzene	5.50E-05	1.044	0.065	0.0119	0.0007
Beryllium	3.10E-07	0.006	0.000	0.0001	0.0000
Cadmium	4.80E-06	0.091	0.006	0.0010	0.0001
Chromium	1.10E-05	0.209	0.013	0.0024	0.0001
Formaldehyde	2.80E-04	5.316	0.332	0.0607	0.0038
Lead	1.40E-05	0.266	0.017	0.0030	0.0002
Manganese	7.90E-04	14.998	0.937	0.1712	0.0107
Mercury	1.20E-06	0.023	0.001	0.0003	0.0000
Nickel	4.60E-06	0.087	0.005	0.0010	0.0001
PAH	4.00E-05	0.759	0.047	0.0087	0.0005
Selenium	2.50E-05	0.475	0.030	0.0054	0.0003
TOTAL		23.79	1.49	0.27	0.0170
Napthalene	3.50E-05	0.664	0.042	0.0076	0.0005

Methodology

Emission Factors are from AP-42 (final, 4/00), Tables 3.1-4 and 3.1-5.
Emissions (tons/yr) = Heat input rate (MMBtu/hr) x Emission Factor (lb/MMBtu) * 8760 hr/yr / 2,000 lb/ton
Limited Emissions (tons/yr) = Heat input rate (MMBtu/hr) x Emission Factor (lb/MMBtu) * 100 hr/yr / 2,000 lb/ton
Napthalene is considered a PAH, therefore Napthalene emissions were accounted for under the PAH emissions.

Appendix A: Emissions Calculations

HAPs Emissions for natural gas-fired turbines

Company Name: Montpelier Electric Generating Station
 Address, City IN Zip: 8265 South 450 West, Poneto, IN 46781
 CP: 179-12321
 Plt ID: 179-00026
 Reviewer: NLJ
 Date: 06-07-2000
 Sixteen (16) combustion turbines @ 270.9 mmBtu/hr each
 Heat Input Capacity: 4334.4 MMBtu/hr

Pollutant	Emission Factor (lbs/MMBtu)	Total Emissions (tons/yr)	Emissions Per Turbine (tons/yr)	Total Limited Emissions (tons/yr)	Limited Emissions Per Turbine (tons/yr)
1,3 Butadiene	4.300E-07	0.008	0.001	0.0004	0.000
Acetaldehyde	4.000E-05	0.759	0.047	0.0369	0.002
Acrolein	6.400E-06	0.122	0.008	0.0059	0.000
Benzene	1.200E-05	0.228	0.014	0.0111	0.001
Ethylbenzene	3.200E-05	0.608	0.038	0.0295	0.002
Formaldehyde	7.100E-04	13.479	0.842	0.6555	0.041
PAHs	2.200E-06	0.042	0.003	0.0020	0.000
Propylene Oxide	2.900E-05	0.551	0.034	0.0268	0.002
Toluene	1.300E-04	2.468	0.154	0.1200	0.008
Xylene	2.600E-05	0.494	0.031	0.0240	0.002
TOTAL		18.76	1.17	0.91	0.06
Napthalene	1.300E-06	0.025	0.003	0.00	0.000

Methodology

Emission Factors are from AP42 (final, 4/00), Table 3.1-3.

Emissions (tons/yr) = Heat input rate (MMBtu/hr) x Emission Factor (lb/MMBtu) * 8760 hr/yr / 2,000 lb/ton

Limited HAP Emissions (tons/yr) = Heat input rate (MMBtu/hr) x Emission Factor (lb/MMBtu) * 426 hr/yr / 2,000 lb/ton

Napthalene is considered a PAH, therefore Napthalene emissions were accounted for under the PAH emissions.

Montpelier Electric Generating Station
Poneto, Indiana
179-12321-00026

** unpaved roads **

The following calculations determine the amount of emissions created by unpaved roads, based on 8760 hours of use and AP-42, Ch 13.2.2 (Supplement E, 9/98).

1.5 trip/hr x
 0.181 mile/trip x
 2 (round trip) x
 8760 hr/yr = 4756.68 miles per year

PM10
 $E_f = k \cdot [(s/12)^{0.8}] \cdot [(W/3)^b] / [(M/0.2)^c]$
 = 1.63 lb/mile
 where k = 2.6 (particle size multiplier for PM-10) (k=10 for PM-30 or TSP)
 s = 6.4 mean % silt content of unpaved roads
 b = 0.4 Constant for PM-10 (b = 0.5 for PM-30 or TSP)
 c = 0.3 Constant for PM-10 (c = 0.4 for PM-30 or TSP)
 W = 19 tons average vehicle weight
 M = 2 surface material moisture content, % (default is 0.2 for dry conditions)

0.029503 lb/mi x 4756.68 mi/yr = 0.070168 tons/yr
 2000 lb/ton

PM
 $E_f = k \cdot [(s/12)^{0.8}] \cdot [(W/3)^b] / [(M/0.2)^c]$
 = 1.63 lb/mile
 where k = 10 (particle size multiplier for PM-10) (k=10 for PM-30 or TSP)
 s = 6.4 mean % silt content of unpaved roads
 b = 0.5 Constant for PM-10 (b = 0.5 for PM-30 or TSP)
 c = 0.4 Constant for PM-10 (c = 0.4 for PM-30 or TSP)
 W = 19 tons average vehicle weight
 M = 2 surface material moisture content, % (default is 0.2 for dry conditions)

0.108057 lb/mi x 4756.68 mi/yr = 0.256996 tons/yr
 2000 lb/ton